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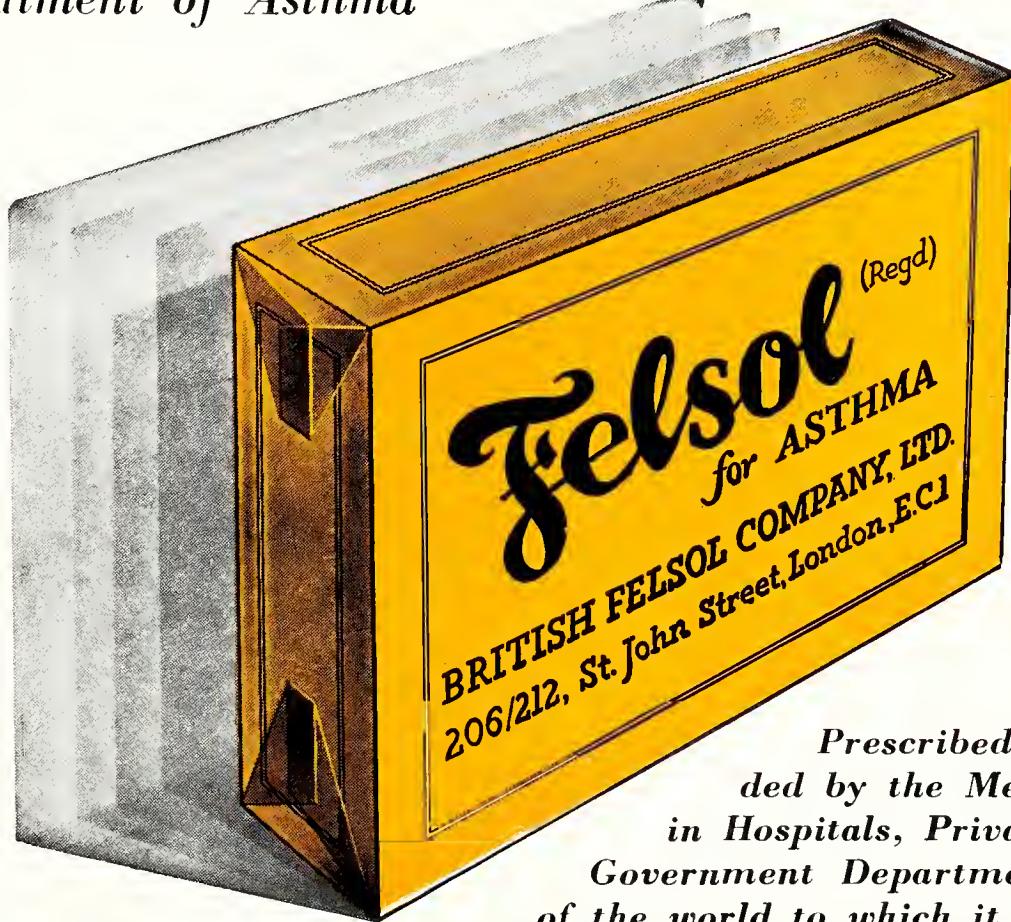


# CHEMIST AND DRUGGIST

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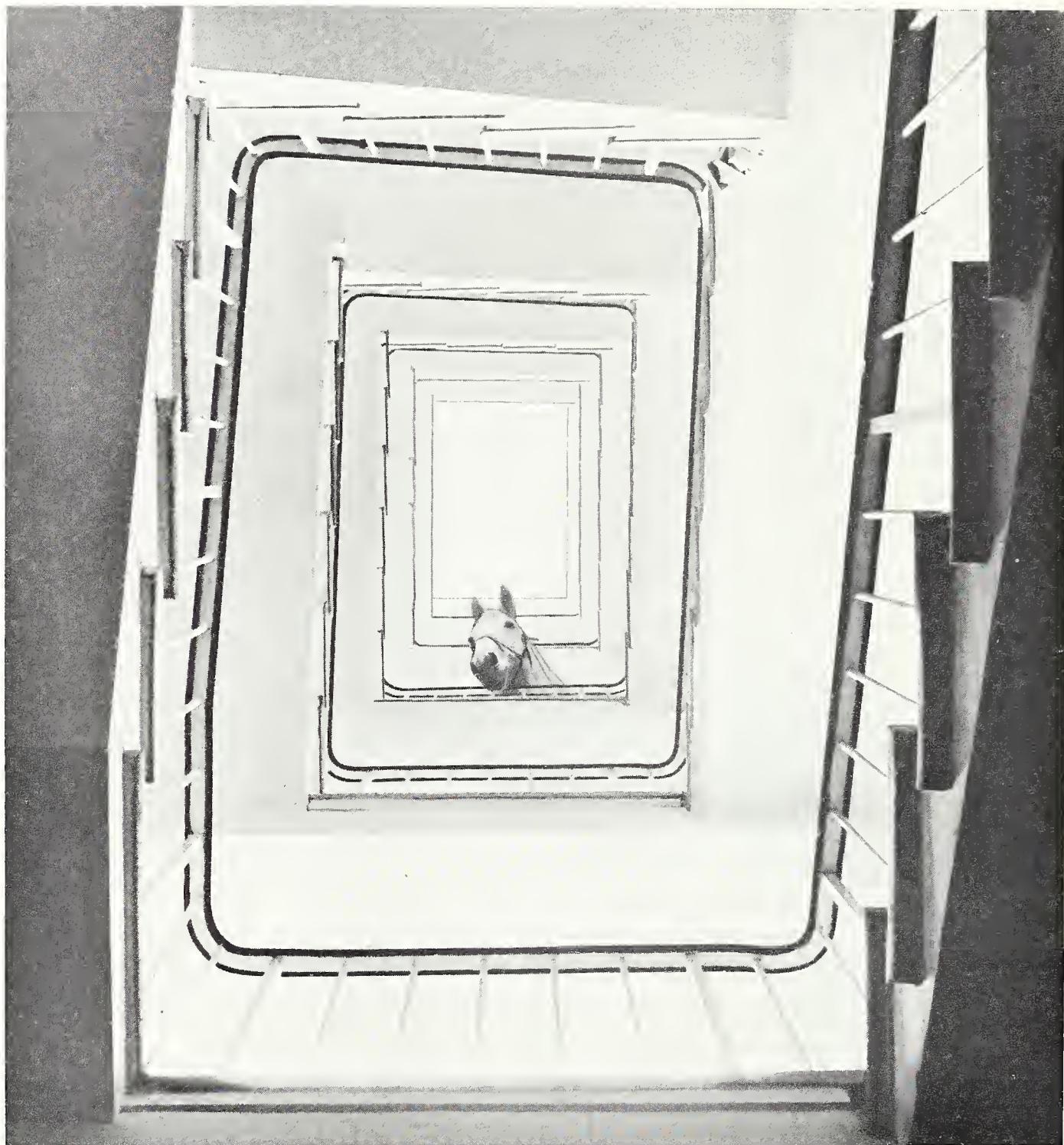
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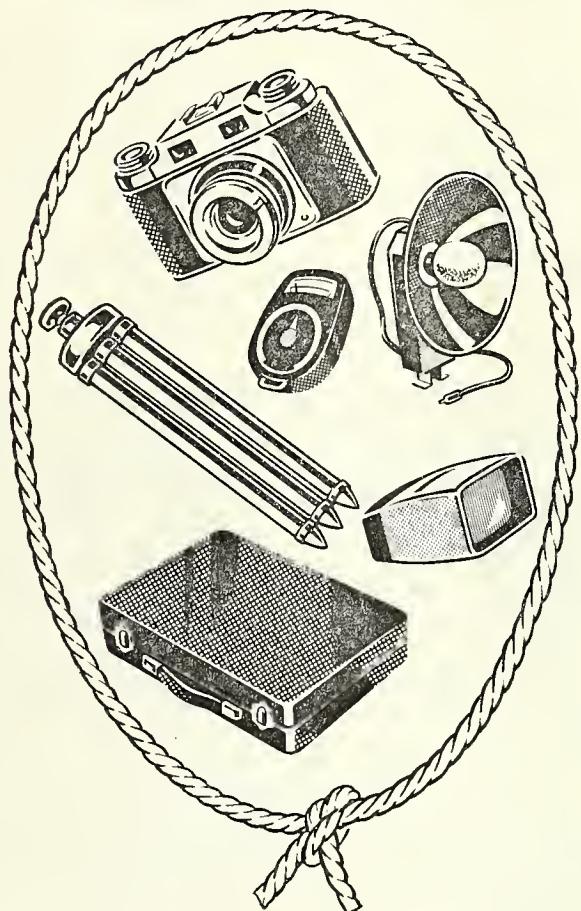
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**THE CHEMIST  
AND DRUGGIST**

ESTABLISHED 1859

THE WEEKLY NEWSPAPER FOR PHARMACY  
and all sections of the drug, pharmaceutical,  
fine chemical, cosmetic, and allied industries

*Official organ of the Pharmaceutical Society of Ireland  
and of the Pharmaceutical Society of Northern Ireland*

Volume 179

March 30, 1963

No. 4337

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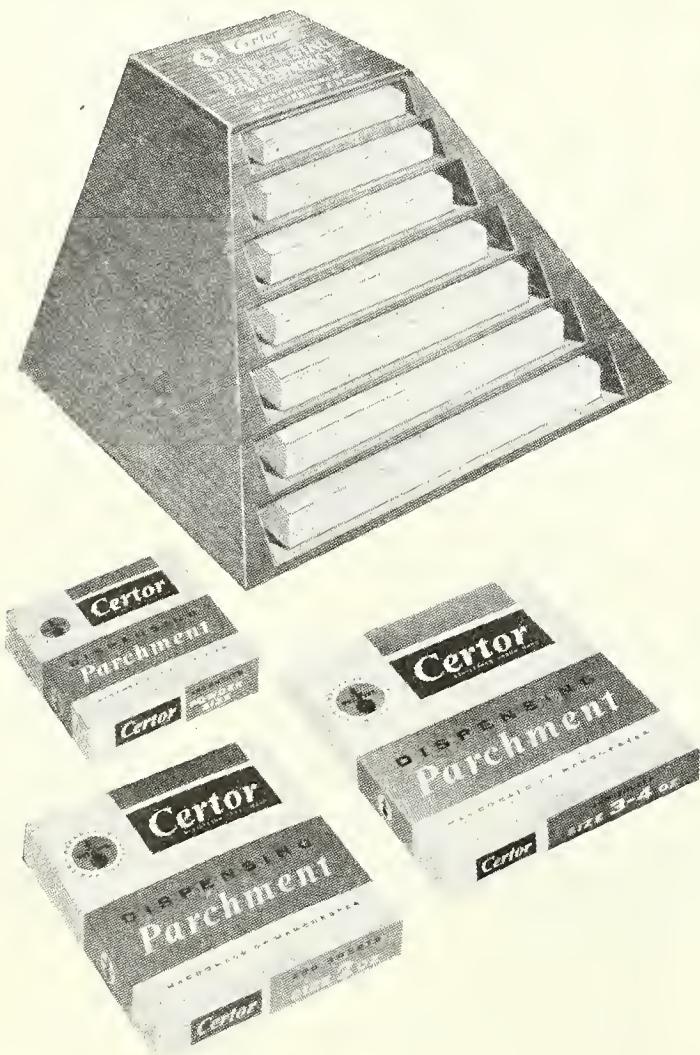
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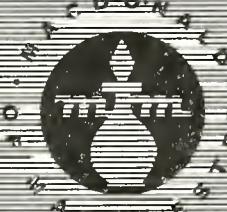
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# The CHEMIST AND DRUGGIST

Volume 179

MARCH 30, 1963

No. 4337

## Doctors-Dentists' Pay

### SUBSTANTIAL INCREASES APPROVED

THAT the Government had accepted the recommendations of the report of the Review Body on Doctors and Dentists' Remuneration was stated by the Prime Minister in a written Parliamentary reply on March 25. The average annual net income from all sources of general medical practitioners will be increased from £2,425 to £2,765. Hospital doctors' and dentists' salaries and those of hospital administrators will rise by about 14 per cent. For general dental practitioners the current target income of £2,400 will go up to £2,740. The new rates are expected to be effective from April 1 and are intended to remain in force for a minimum of three years.

## Travelling Fellowships

### RESEARCH IN DENMARK AND SWEDEN

APPLICATIONS are being invited for the Carlsberg-Wellcome Travelling Research Fellowships, 1963-64, the object of which is to encourage working visits, on an exchange basis, between Danish and British investigators in any branch of the natural sciences that has a bearing upon human and animal medicine. One Fellowship annually is awarded to a candidate from the United Kingdom for a year's work in Denmark and one annually to a Danish candidate for a year's work in the United Kingdom. The stipend may range from £1,000 to £2,000 a year (or the equivalent sums in Danish Kronor), travelling and some incidental expenses being provided in addition. Similar Wellcome-Swedish Travelling Research Fellowships are provided jointly by the Medical Research Council of Sweden and the Wellcome Trust for reciprocal exchange visits between Sweden and the United Kingdom. Inquiries from candidates in the United Kingdom should be addressed to the deputy scientific secretary, Wellcome Trust, 52 Queen Anne Street, London, W.1, from whom further particulars may be obtained. When seeking additional information about opportunities for research in Denmark the applicant should state his field of research. Completed applications must be submitted before April 12.

## Pesticides Sales

### BOARD OF TRADE FIGURES

ACCORDING to the Board of Trade *Business Monitor* (H.M. Stationery Office: subscription, 7s. 6d. per year), larger manufacturers' total

sales in 1962 of pesticides and allied products were, at £15.8 millions, nearly 6 per cent. greater than in 1961. The increase was accounted for solely by herbicides, which at £6.2 millions were £1.3 million (27 per cent.) higher than a year earlier; the value of exports increased by £0.5 million (about 40 per cent.). Sales of pesticides, fungicides and other products were lower in 1962 than in 1961; in fungicides the fall was accounted for by exports. In the last quarter of 1962, total sales were, at £3.3 million, £0.7 million (29 per cent.) higher than a year earlier—accounted for by increases in herbicides (up 80 per cent.) and, to a lesser extent, by insecticides (up 15 per cent.). The *Business Monitor* points out, however, that figures for that quarter may have been affected by attempts by manufacturers to spread sales more evenly over the year. The comparisons given are in terms of current values; but because wholesale prices have shown little change since early 1961, the results in terms of volume should be only slightly different.

## Cosmetic Chemists

### NEW YORK CONGRESS, 1964

THE Third Congress of the International Federation of Societies of Cosmetic Chemists, organised by the Society of Cosmetic Chemists, is being held in New York from June 21-28, 1964. Four main sessions will deal with safety aspects of cosmetic usage; instrumentation's rôle in cosmetic re-

search and control; cosmetics versus skin ageing; and cosmetics and micro-organisms. Arrangements have been made for British visitors to travel by a special flight. If sufficient support is obtained, the cost from London to New York and return will be about £75 per person. Intending participants should contact the general secretary, Society of Cosmetic Chemists of Great Britain, 2 Lovers Walk, London, N.3, so soon as possible.

## Centenary Conference

### GUILDHALL RECEPTION FULL

THE rate at which applications have been received for Conference tickets is appreciably greater than was anticipated and the number now exceeds the total for the 1953 London Conference. One effect is that no further tickets can be allocated for the Guildhall reception. That is regretted by the London Committee but, as guests of the City of London, they must respect the limit set by the authorities. The Committee is making plans for entertaining members of the Conference whose applications for tickets are received after all the invitations to the Guildhall reception have been allocated.

## Alkali Works

### NEW ORDER EXTENDS CONTROL

THE Alkali, Etc., Works Order, 1963 (H.M. Stationery Office, price five-pence), effective April 1, extends the list of works controlled under the Act of



**NARROW ESCAPE:** The Folkestone factory of Pfizer, Ltd., had a "near miss" recently when a Belgian jet fighter crashed in fog on Dover Hill, Folkestone. The plane had come over the Channel and, as it approached Folkestone, hit a thick blanket of fog. The arrow points to the Pfizer Plant.

1906. Among works now scheduled by the Order are those in which the following operations are carried out:—manufacture of phosphorus; use of yellow phosphorus in any chemical or metallurgical process. Manufacture of ammonia; use of ammonia in the ammonia-soda process; use of ammonia in the manufacture of carbonate, nitrate or phosphate of ammonia or urea; manufacture of hydrogen cyanide or its use in any chemical manufacturing process; manufacture of acetylene or its use in any chemical manufacturing process; manufacture of methylamine, ethylamine, calcium carbide, formaldehyde, acetaldehyde, acrolein or the methyl ethyl or propyl derivatives of acrolein; manufacture of acetic, malic or phthalic anhydrides or the corresponding acids; treatment of any chrome ore or concentrate for the production of chromium compounds or chromium metal by dry processes giving rise to fume; preparation of magnesium or any compound of magnesium by dry processes giving rise to fume; recovery of metallic cadmium or manufacture of cadmium alloys or compounds by dry processes giving rise to fume; preparation of manganese or its alloys or its compounds by dry processes giving rise to fume; and recovery of metal from scrap cable by burning the insulation. The Ministry of Housing announces that, from April 1, when works to which the Order applies are required to be registered, the district alkali inspectors will be ready to discuss with owners of works their proposals for applying the best practicable means of preventing the escape of offensive gases, etc.

## Empty Shops Taxed?

### SMALL SHOPKEEPERS' PLAN

A TAX on shop properties that remain vacant longer than a month—"usually when owners are seeking exorbitant prices or rents"—was suggested to the Chancellor of the Exchequer on March 17 by the national executive of the National Union of Small Shopkeepers, meeting in Nottingham. The executive also decided to oppose stamp trading, described by members as an attempt to impose American methods on the British housewife against her wishes.

## Reports on Products

### ADVICE ON HOUSE GLOVES, TOOTH-PASTES

HOUSEHOLD gloves and tooth-pastes were subjects of critical review in the February issue of *Shopper's Guide*, published by the Consumer Advisory Trust, Ltd., 86 Edgware Road, London, W.2. The article on household gloves notes big variations in quality and "chaotic" sizing, and comments that price was no guide to durability. In all, thirteen brands were subjected to a number of user and laboratory tests to determine comfort and durability. A comparison was also made of the respective merits and demerits of rubber and synthetic materials in relation to specific tasks (painting, household cleaning, etc.). The three brands selected by *Shopper's Guide* as coming nearest to being completely satisfactory were Playtex "living" gloves, Oxford (or Prova) lined and Boots' flocklined.

When buying tooth-pastes, *Shopper's Guide* states that "over-big cartons, special offers and misleading size descriptions can make value-for-money comparisons almost impossible." Cost can range from 8½d. to nearly 2s. per oz. One carton was found to be about four times the capacity of the tube it contained, and descriptions like "medium" (on the smallest tube found!) and "family" (which could

mean 3 oz., 5 oz. or 7 oz.) "do little to help." Special offers (none, it is stated, offering better value for money than brands sold without them) also added to the confusion. Aerosols were considered to present poor value so far as quantity was concerned. *Shopper's Guide* points out, however, that considerable economies were often to be made by buying "economy" or "family" sizes.

## UNITED STATES NEWS

### Commemorative Room Opened

THE American Institute of the History of Pharmacy, Madison, Wisconsin, has expanded its headquarters facilities with the opening of a study and conference room commemorating its first director (1941-1957), Mr. G. Urdang. The room, which serves as a study for advanced students and visiting scholars in the social studies of pharmacy, and as a conference room, houses the furniture, books, and pharmaceutical antiques from Mr. Urdang's personal study, honorary medals and diplomas.

### Pharmacy Journals of the World

WHAT is claimed the "first world-wide compilation of pharmacy periodicals" appeared in the February issue of the *American Journal of Hospital Pharmacy*. Containing more than 900 entries, and representing the pharmacy periodicals of about seventy countries, the list was compiled by Theodora Andrews (librarian at the school of pharmacy, Purdue University) from a preliminary list prepared by Miss Winifred Sewell for the Commission on Pharmaceutical Abstracts of the International Pharmaceutical Federation. Reprints are obtainable from the American Society of Hospital Pharmacists, 2215 Constitution Avenue, N.W., Washington 7, D.C., U.S.A.

### Two Measles Vaccines Licensed

THE Department of Health, Education and Welfare has licensed two United States companies (Pfizer Laboratories and Merck, Sharp & Dohme Inc.), to manufacture a "killed" and an attenuated "live" measles vaccine respectively. That was announced in Washington on March 21. The development of the vaccines is said to constitute "one of the most significant advances in recent years to eliminate a serious health hazard to children," making it "now possible to eliminate the disease." Both vaccines are expected to be generally available to American physicians within months, and small quantities are being shipped to a dozen African nations "very shortly." Both vaccines stem from the work of Nobel prize-winner Dr. John Enders (Harvard University) and his associate Dr. Thomas Peebles, who isolated a strain of measles virus in 1954. Together they prepared a "live" virus vaccine in 1958. The inactivated vaccine is administered in three injections about a month apart; the live vaccine is given as a single injection with the concomitant administration of gamma globulin. The U.S. public health service is not recommending one vaccine over the other, though the immunity conferred by the killed vac-

cine is understood to show "a complete drop-off" after a year. A warning has been given that measles must not be confused with rubella (German measles) for which there is as yet no immunological product, though workers in the United States had isolated the rubella virus in 1962 and had succeeded in growing it in the laboratory, "so that a vaccine may be expected in two or three years." Pfizer Laboratories hope that their killed material will be ready for issue within the next four or five weeks. Clinical studies in 15,000 United States children were conducted with both killed vaccine and with two injections of inactivated vaccine, followed by a single injection of a live, attenuated vaccine. Messrs. Pfizer state that they are continuing research on live attenuated vaccine, following results they have obtained with the combined schedule of prophylaxis. Working with killed vaccine, they developed measles antibodies to a level ensuring immunity in 90 to 95 per cent. of those who received three injections of killed vaccine or the combined system. In the United Kingdom Pfizer, Ltd., have been engaged in research on a measles vaccine for some time and hope that it will not be too long before they issue a killed vaccine in Britain. Two other U.S. companies are understood to be ready to start producing and marketing measles vaccine as soon as they receive federal clearance. They are Parke Davis & Co. and Eli Lilly & Co. Messrs. Parke Davis do not expect to market their ("live") vaccine in America, however, before late in 1963.

### Fewer New Drugs in 1962

A RECENT report in *Oil, Paint and Drug Reporter* (New York), quotes Mr. P. de Haen, a New York consultant, as saying that only twenty-eight new single chemical entities were put on the American market in 1962, against forty-one in 1961. Thirteen of the twenty-eight originated in Europe. During the year 255 new products were introduced by 108 manufacturers—the lowest number in any year for a decade—and eighty-four new dosage forms. Mr. de Haen considers the falls in number to be partly voluntary on the part of manufacturers and partly due to new legislation and regulations. A survey by *Pharm Index* pharmaceutical reference service gives higher figures. It says that a record 739 new trade-named pharmaceuticals were introduced, but that 594 of them came from 189 "minor" manufacturers. Of the ninety-seven largest U.S. manufacturers of "ethical" pharmaceuticals, thirty introduced no new product during 1962.

## NEWS IN BRIEF

THE annual meeting of members of the Proprietary Articles Trade Association is being held at the Connaught Rooms, Great Queen Street, London, W.C.2, at 3 p.m. on April 18.

TREATMENT of leukaemia, penicillin-streptomycin combinations, and Adrenoxyl and haemostasis are subjects of review in the March 22 issue of the *Medical Letter*.

A SYMPOSIUM on "Chemistry and Mode of Action of Fungicides" is being held at Hatfield College of Technology, Roe Green, Hatfield, Herts, on May 16. Four papers are being presented by specialists.

THE third annual survey conducted by the British Aerosol Manufacturers' Association of aerosol units shows that 52 million non-food containers were filled by members of the Association on their own premises during 1962.

A JOINT deputation from the Road Haulage Association and the Traders' Road Transport Association met Mr. Edward du Cann (Economic Secretary, Treasury) on March 11, and made a plea for a reduction in the fuel tax.

ITEMS accepted for inclusion in the Design Index of the Council of Industrial Design during February included an automatic slide projector by Aldis Bros., Ltd., Birmingham, 28; and an 8-mm. movie projector by Kodak, Ltd., London, W.C.2.

OLDHAM, Lancs, borough council has agreed that Oldham Co-operative Society, Ltd., should be allowed to discontinue using Council-owned premises at 10 The Green as a pharmacy. The Society reported difficulty in obtaining pharmacists.

PRICES of a number of drugs, preparations and appliances included in the Drug Tariff, Scotland, are being revised from April 1. Disposable drainage bags and tubes for suprapubic belts have been added (as from March 1) to the "parts for repairs and replacement" in Section IV of the Tariff.

THE Wellcome Trustees have announced the appointment of the following as Wellcome senior research fellows in clinical science from April 1: Dr. G. F. Joplin (Postgraduate Medical School of London); Dr. R. D. Lowe (St. George's hospital, London) and Dr. A. Murray Harper (Royal Infirmary, Glasgow).

A ONE-YEAR course of instruction in powder technology, leading to a post-graduate diploma, is being started in October by the Faculty of Engineering, King's College, University of London, Strand, London, W.C.2. It is designed for students with degrees in engineering, physics, chemistry or certain applied sciences.

IN a preliminary communication to the *Lancet* (1963, 1, 638), workers at Guy's hospital medical school have reported "a high frequency" of foetal abnormalities following administration of imipramine (Tofranil) to pregnant rabbits. The doses used are stated to have been roughly proportional to those used in humans and the workers suggest that the drug be used with caution in women during the child-bearing period.

## TOPICAL REFLECTIONS

By Xrayser

## Internecine dissent

I have a great deal of sympathy for Mr. Keith Jenkins' expression of disappointment in his letter of last week (p. 308). He has, as he says in that letter, campaigned for several years for unity in pharmacy, even to the extent of a new organisation that could represent all facets of pharmacy, and the recent evidence of disunity is undoubtedly a setback to his hopes and to the aspirations of many. The situation is the more difficult to grasp when one considers the composition of the various bodies, for no fewer than five members of the Pharmaceutical Society's Council are also members of the Executive of the National Pharmaceutical Union and, of those five, four represent private contractors on the Central N.H.S. (Chemist Contractors) Committee. On the face of it, such overlapping representation should make for unity of purpose and a welding together of the various bodies. Not for the first time I wonder if it is possible to be so completely detached and objective as the diverging policies seem to require.

## Official note

Reports issued of the work of the Council of the Pharmaceutical Society have a tendency to conceal much of the hard work done by its members. The extremely guarded statement appearing on p. 311 in regard to the recent agreement of the National Joint Industrial Council for Retail Pharmacists is a case in point. It should not be necessary to read between the lines to try to elucidate the attitude of the Society's Council to that agreement. If the Council approves the agreement, there seems to be little harm in saying so. Equally, if it does not approve, there can be no harm in expressing disappointment, if not open disapproval. One must conclude, from the carefully drawn statement, that the Council, in fact, disapproves, for, after concluding that it would be inappropriate to take official notice of the agreement, the Council claimed that the rates fixed gave added point to the view that it should concern itself with the economic interests of its members, and that such factors should be taken into account in forming policy. If the reticence shown is out of deference to Jenkin, then the effects of the Jenkin judgment are still a little out of focus. All that Jenkin says is that it is not within the objects, powers or purposes of the Society to regulate the wages and conditions of employment as between masters and their employees who are members of the Society. Even to express categorical approval or disappointment of the findings of the J.I.C. would, at the most, be only comment. In no sense could it be found to be "regulating the wages and conditions of employment." If there are other reasons for the inappropriateness of taking official note, perhaps we could be told what they are. I note, officially or otherwise, that the Public Services Committee of the Council considered the implications of the new J.I.C. agreements in relation to the salaries of hospital pharmacists. I am considering them in relation to their effects on the negotiations between the Central N.H.S. (Chemist Contractors) Committee and the Ministry of Health.

## Caricature

Variety appears to have been a feature of the evening meetings of the Scottish Department in Edinburgh during the past session, and the meeting held on February 15 added one more ingredient to the dish when Dr. H. P. Tait (secretary, Scottish Society of the History of Medicine) gave an illustrated lecture (p. 312) on the subject of medicine and pharmacy in caricature. The illustrations published in your pages, allied to the text, suggest that the evening must have been both profitable and entertaining for those fortunate enough to be present. Figure 10, illustrating the notorious James Graham, is a good example of the outstanding craftsmanship of John Kay, who, in order to open his own business as a barber in Edinburgh, was obliged to purchase the freedom of the city from the Society of Surgeon-Barbers. Caricaturing began as a sideline. To pharmacists, his best known work was probably the sketch of William Wilson, better known as "Mortar Willie."

## CONTRACEPTIVES AND PENICILLINS

### Further lectures in Chelsea series

FIFTH lecture in the series on advances in therapeutics, given at Chelsea College of Science and Technology, was by DR. BRIDGETT A. MASON (G. D. Searle & Co., Ltd.) on February 12. Speaking on "oral contraceptives" Dr. Mason said that the search for such substances began in the early 1950's from the knowledge that, during pregnancy, further conception did not occur. The menstrual cycle was under hormonal control, follicle-stimulating hormone (F.S.H.) from the anterior pituitary gland causing a follicle in the ovary to develop. Production of oestrogen by the ovary was also stimulated, and that depressed the F.S.H. of the pituitary, which then produced luteinising hormone (L.H.), bringing about the release of an ovum. The ovary now also secreted progesterone, which followed the oestrogen in preparing the endometrium of the uterus to receive a fertilised ovum. If pregnancy occurred, progesterone and oestrogen continued to be produced, and progesterone inhibited the pituitary gonadotrophins and hence ovulation.

Estrogens could be used to inhibit ovulation, but large doses were required and nausea occurred; progestones had been commercially available only for injection. Then the 19-nor steroids had been found to have progestational activity when given orally. In 1956, trials began with norethynodrel as a contraceptive, but "breakthrough" bleeding occurred and an oestrogen ethynodiol 3-methyl ether (mestranol), was added. The combination was found far more effective than physical or chemical methods, but during the trial it was noticed that the less intelligent members of the community were better able to remember to take tablets regularly than were the more intelligent.

Fertility on ceasing treatment was unimpaired, and side effects, similar to those of early pregnancy, disappeared with continued administration. They had been much reduced by a decrease in dosage from 10 mgm. to 2.5 mgm. but, in order to maintain full effectiveness, the proportion of mestranol in each tablet had been increased.

Dr. Mason discussed the reported side effects of oral progestins, and commented on the dangers of oral contraception. She showed that the incidence of adverse reactions experienced during the past eight years was no more than that to be expected in women of child-bearing age. Such reactions, she said, were bound to be present in large-scale trials. At present, norethisterone acetate, to which her remarks also applied, was the only other substance approved by the Family Planning Association, but many new products were likely to appear in the near future, and they would probably be cheaper. Dr. Mason foresaw, in conclusion, the coming of a "male pill."

For the sixth lecture, on February 19, DR. E. T. KNUDSEN (Beecham Research Laboratories, Ltd.), spoke on "Semi-synthetic Penicillins." They had been de-

veloped, he said, after the discovery in 1959 that, under certain fermentation conditions, the penicillin mould could produce the penicillin nucleus. To that nucleus could be added a variety of complex side-chains, whereas previously the mould had been able to incorporate only simple groups into the molecule. Research began for penicillins which might be (1) acid-stable, for oral administration, but with new characteristics; (2) active and stable in the presence of penicillinase; (3) wider in antibiotic spectrum than penicillins in current use; (4) not cross-allergenic with other penicillins, or unlikely to produce new cases of penicillin allergy.

The speaker then discussed penicillins that had been marketed to fulfil some of those conditions. PHENETHICILLIN (phenoxyethylpenicillin) was acid-stable, and its activity was similar to that of penicillin G and V, but it also had an activity against some mildly penicillin-resistant staphylococci (those producing only small amounts of penicillinase). Serum concentrations obtained orally with equivalent doses were twice those of penicillin V and equal to those of penicillin G by intramuscular injection. PROPICILLIN (phenoxypropylpenicillin) was similar, but had a higher activity against streptococci and a good activity against mildly resistant staphylococci; it was also well absorbed when given by mouth.

The first penicillinase-stable penicillin to be marketed had been METHI-

CILLIN which was about 100 times less active than penicillin G against penicillin-sensitive staphylococci but, at that concentration, equally effective against both sensitive and resistant staphylococci and showed good activity against streptococci. The product was primarily indicated for the treatment of resistant staphylococcal infections, but should also be used in mixed infections in which a resistant staphylococcus was associated with an otherwise penicillin-sensitive organism. Not being acid-stable, it must be given by injection. The search for an oral penicillin with similar activity had led to the development of CLOXA-CILLIN, which was found to be about four times more active than methicillin and capable of being employed, therefore, at a lower dosage. Cloxacillin brought the treatment of minor resistant staphylococcal infections within the scope of treatment with oral penicillins.

In the field of broad spectrum penicillins, AMPICILLIN, unlike penicillin G, was effective against a wide range of Gram-negative organisms. It could be given by mouth, but was not stable to penicillinase, the main indications being respiratory, gastrointestinal and urinary-tract infections.

Dr. Knudsen said that no pathogenic organism was known to have unequivocally developed a resistance to penicillin during the course of treatment—the organism was either sensitive or not. Side effects of the oral penicillins included nausea, but that was reduced when given half an hour before meals. Other occasional side effects common to all penicillins were diarrhoea, rashes and allergies.

## COST OF THE NATION'S HEALTH

### Address to Scottish chemists

UNDER the National Health Service, Britain spends a considerably smaller proportion of its national income on health than other countries in the western world. That was disclosed by MR. G. TEELING-SMITH (director, Office of Health Economics) when he addressed a meeting of the Edinburgh and South-eastern Scottish Branch of the Pharmaceutical Society held in Edinburgh on February 8.

For example, America spent £6 14s. out of every £100 on medical care, while Britain spent only £4 10s. That certainly did not mean that medical attention in Britain was inferior. "There is no doubt that a great deal of the credit for the good value provided under our comparatively inexpensive Health Service must go to the responsible Government ministers," he said. "They have effectively restrained the rising health costs without visibly damaging the Service." A survey carried out as part of the Porritt review on the medical services in Great Britain had shown that, on the whole, the British public were satisfied with the N.H.S.

Restriction on health expenditure, however, had its long term dangers and the speaker illustrated the point by showing that pharmacists now earned a smaller "share of the cake" for their N.H.S. dispensing than they did in 1948. In real money terms, for most years since then, they had actually been

worse off than at the outset of the Service. That would inevitably lead, he thought, to there being fewer or less efficient pharmacies in the future.

The drug industry was in danger of having to cut research programmes if their prices were forced down to curb N.H.S. expenditure. At present it was estimated that the industry in Britain spent about £10 million a year on research and was benefiting from a world-wide expenditure of about £150 millions. "This sort of investment cannot be achieved if patent protection is withdrawn, normal competitive advertising is restricted and drug companies are expected to sell their established products at a marginal profit." There had been similar dangers from restrictions on hospital buildings, and Mr. Teeling-Smith praised the present Minister of Health's new hospital plan which, he said, should raise the future standard of hospital care.

Finally, the speaker pointed out that expenditure on medical care could often bring an economic gain far in excess of its cost. It was estimated that modern drugs had saved the lives of about 175,000 people who, without them, would have died in childhood. Already those extra survivors were earning about £19 millions a year; substantially more than the £12 millions estimated as the cost for all medicines prescribed for children under the Health Service.

## NEW PRODUCTS AND PACKS

**Oral Penicillin in Syrup.**—Beecham Research Laboratories, Ltd., Great West Road, Brentford, Middlesex, announce that Orbenin, "the only oral penicillin in the United Kingdom effective against resistant staphylococci," is now available as a syrup. The latest presentation should, it is claimed, prove specially valuable to the very young, and to



elderly and other patients for whom a liquid preparation is preferable to capsules. The product is supplied as a powder for preparing 60-mils of syrup. When dispensed, each 5 mils contain 125 mgm. of cloxacillin. Recommended dosage is, for infants (0-2 years) one teaspoonful every six hours; for children (3-10 years) two teaspoonfuls every six hours; and for adults four teaspoonfuls every six hours. To ensure precise dosage, a plastic teaspoon is supplied with each bottle.

**Ointment for Relief of Pruritus.**—Pfizer, Ltd., Sandwich, Kent, announce that Methral brand fluperolone acetate is now available as a greasy or non-greasy topical ointment in tube of 10 gm. Claimed outstanding in speed of onset of action in relieving pruritus, it "exerts an anti-inflammatory activity at tissue level, controlling local reaction to infection, allergens and trauma." Methral is understood to be twenty times as potent as hydrocortisone and 1.5 times as potent as prednisolone.

**An Inhalant Against Bronchospasm.**—Moore Medicinal Products, Ltd., Waverley House, Waverley Place, Aberdeen, Scotland, have launched a new speciality, Iso-Brovon inhalant, containing 2 per cent. w/v of isoprenaline hydrochloride and 0.2 per cent. w/v of atropine methonitrate. Occasions for Iso-Brovon are for the rapid and prolonged relief of bronchospasm in chronic bronchitis and asthma, and for suppressing threatening attacks of asthma. Ten puffs from a manually operated inhaler are usually sufficient for average cases. The pack is a bottle of  $\frac{1}{2}$  fl. oz. (15 mils).

**Ethionamide with Isoniazid.**—Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, Essex, announce the introduction of a new speciality Trescazole brand ethionamide/isoniazid for the treatment of tuberculosis. Each sugar-coated, buff-coloured tablet con-

tains 125 mgm. of ethionamide and 75 mgm. of isoniazid. Trescazole is indicated mainly in the treatment of pulmonary and other forms of tuberculosis in patients whose organisms are sensitive to the two drugs. In the treatment of chronic isoniazid-resistant pulmonary tuberculosis Trescazole, in association with one or preferably two other drugs to which the individual patient's organisms are sensitive, "may be superior to a similar drug combination containing no isoniazid." Administration is by mouth during or immediately after a meal. The suggested adult daily dosage is four tablets, given either as a single administration at night or subdivided into two tablets morning and evening. For drug-resistant pulmonary disease, the recommended dosage is three tablets morning and evening, given in association with one or two other drugs according to the resistance pattern of the patient's organism. The packs are containers of 100 and 500 tablets.

**Repackaged.**—William R. Warner & Co., Ltd., Eastleigh, Hants, have redesigned the packs of their speciality Agarol. The bottle has been given a



more striking label in black and yellow to attract the eye of the casual shopper, and the bottle has a wider neck to facilitate pouring of the liquid. Messrs. Warner "regret that they are unable to take back existing stocks in exchange for the newly packaged Agarol."

**A Product Against Pimples.**—Avrogel, a new preparation to clear spots and pimples, is being launched by L. E.

Vincent & Partners, Ltd., 7 Chesterfield Gardens, London, W.1, with a Press advertising campaign that starts on March 29. Avrogel is described as "a non-greasy preparation containing three compounds designed to unblock the pores and reduce inflammation, to work until the blemish is cleared, and to provide an antiseptic protection for the healthy skin around the infected area." Avrogel is "practically invisible," and may be used under make-up without difficulty.

**Low-salt Products.**—From Scott-Brand Foods, Ltd. (dietetic division), 10 Victoria Road, London, N.W.10, come a new salt substitute and a range of low-salt foods without added salt. Both are intended for patients prescribed a low-salt diet. In the manufacture of the salt substitute (which is understood to have proved acceptable as a condiment by hospital patients), 75 per cent. of potassium chloride, 20 per cent. of *l*-glutamic acid and 5 per cent. of taurine are blended together and to the mixture is added 1 per cent. of magnesium carbonate. On the label of each of the low-salt foods (minced chicken in jelly; minced turkey in jelly; potted beef with butter; chicken casserole; beef and dumplings; and chicken soup) the sodium content is indicated for the information of physician, dietician and patient.

**French Perfume Range for Britain.**—The Maggy Rouff perfumes which, say the makers, "have been appreciated by the discerning in France since 1950," were introduced into Britain on March 25 by Monsieur E. Arif (president of Parfums Maggy Rouff, Paris), and are being distributed in the United Kingdom by Spalton & Jennings, Ltd., 58 Gough Street, London, W.C.1. For an even longer period the name has been connected with *haute couture*, the Maggy Rouff fashion house having been created in 1928. When the perfumes were first launched in 1950, they "quickly established themselves among the classic perfumes of France." Four years later Monsieur Arif acquired the rights in the perfumes and opened his own establishment at Neuilly, "centre of the French perfume industry." During the next few years he extended the range, adding to his earlier creations Etincelle, Excentric and Fleur Folie two newcomers, Pêle-mêle and Pixiola. The



five perfumes in the present range are thus Etincelle (*cuir de Russie* with a civet, ambergris and natural musk mixture); Excentric ("moves from a fresh fragrance to a mellow, woody tendency"); Fleur Folle (a flowery perfume with a light bouquet); Pêle-mêle (a perfume with the unusual characteristic that its first bouquet, a fresh texture, is succeeded by a new fragrance with "a stronger, deeper feeling"); and Pixiola (flowery and light). The illustration shows a coffret of three bouquets, and the range of sizes in which each of the five perfumes is issued.

**For Dry Skins.**—Revlon International Corporation, 86 Brook Street, London, W.1, have produced a dry-skin-formula variant of their Contempora make-up. For a limited period purchasers are offered a travel-size tube of the product with each tube of Contempora (regular or dry-skin-formula).

**An After-shave.**—A new after-shave lotion "designed for men who are shy of 'beauty parlour' perfumes" is Floid, marketed by M. & R. Norton, Ltd., 9 Park Hill, London, S.W.4. The new product contains citrus fruit essences "because they have been found to have an antiseptic effect on small cuts and sore places." The Spanish biochemists who formulated Floid have based it on haugrol, a preparation used in Spain to protect against skin disorders. Floid after-shave is in two strengths (labelled "softly" and "vigorously"). Also available are Floid electric pre shave and Floid eau de Cologne.

**A New Home Tan.**—"The magnetic appeal of the glowing bronzed holiday woman" can be acquired simply, say Golden, Ltd., Berkeley Square House, Berkeley Square, London, W.1, in a few hours at home by the use of a new product of the company: Ambre Soie. The mousse that "billows from the aerosol" in response to finger-tip pressure has a beauty-cream base with, it is claimed, a deep penetrating quality, carrying the tanning agent (dihydroxyacetone) into the skin, where it is absorbed more effectively and completely than alcohol-based liquids. The mousse is said to overcome the usual drawbacks of patchiness and streakiness. The container holds 6 oz.

**A New Fragrance.**—Max Factor Hollywood and London (Sales), Ltd., 16 Old Bond Street, London, W.1, are presenting as a Cologne in tapered glass bottle, a new fragrance "Jonquille," available in 4-, 6- and 8-oz. sizes. The container has a floral cap in yellow, and the bottles are screened in yellow with the title Jonquille and the words "Cologne de Max Factor." The unit carton has a yellow floral design on white and green. To enable customers to test the product the makers include in the counter display unit a white vase. In the vase is a plastic flower up the stem of which the Cologne is drawn by a process of wick capillary attraction to the trumpet centre of the flower. Customers test by smelling the flower. A matching talc is available.

**A Perfumed Hair Rinse.**—Gibbs-Pepsodent, Ltd., Hesketh House, Portman Square, London, W.1, announce the launching of a new lemon-perfumed rinse for use with Twink home perm.



Left: Floid eau de Cologne (M. & R. Norton & Co., Ltd.). Centre: Ambre Soie with "crown" (Golden, Ltd.). Right: Jonquille Cologne (Max Factor, Hollywood and London (Sales), Ltd.).

## TRADE NOTES

**A Four-jar Pack.**—Burjax (Northern), Ltd., 55 Rochdale Road, Manchester, 4, point out that their Menwin adrenaline cream is issued in a four-jar pack, each jar containing 2 oz. and not as previously stated.

**Combined Offer.**—To popularise the use of fabric softeners with their products Harringtons (London), Ltd., King Henry's Drive, New Addington, Croy-



don, Surrey, are including in their packs of Harringtons' nappies a free sample of Waft, makers of which are Nicholas Products, Ltd., Slough, Bucks.

**A New Size and New Prices.**—Tampax, Ltd., Dunsbury Way, Havant, Hants, announce the introduction of a new "economy" size of forty Tampax (regular and "super"). The price of the Tampax 10 is being increased.

**Cautionary Wording.**—Burroughs Wellcome & Co., 183 Euston Road, London, N.W.1, are incorporating a warning on the Marzine packs advising that the product should not be taken by any woman who may be pregnant. Meanwhile the company is providing labels bearing the cautionary wording for pharmacists to attach to existing stocks.

**Marketing Change.**—Riker Laboratories, (a division of Vantorex, Ltd.), Morley Street, Loughborough, Leics, announce that they are now marketing Neutrapen (penicillinase), which was originated and developed by SchenLab Pharmaceuticals, Inc., U.S.A. The change results from the merger of Messrs. SchenLabs with Riker Laboratories, Inc., Northridge, U.S.A. The selling rights for Neutrapen in this country

have been relinquished by Burroughs Wellcome & Co. Neutrapen is issued as before in single-dose vial containing 800,000 units of penicillinase for intramuscular injection in the treatment of allergic reactions caused by penicillin.

**Discontinued.**—BRITISH SCHERING, LTD., 225 Bath Road, Slough, Bucks, have discontinued the 250-tablet packs of Medinal, gr. 5 and gr. 7½; the 100-tablet pack continues to be available.—A. WANDER, LTD., 42 Upper Grosvenor Street, London, W.1, announce that they are discontinuing the production and sale of Alocol cream, which has been available in 8- and 80-oz. bottles. Alocol tablets continue to be available in bottles of sixty and 120.

**Twenty-four Hour Shaver Service.**—At a new service station at 14 Old Quebec Street, London, W.1, Sunbeam Electric, Ltd., Nerston, East Kilbride, Glasgow, are providing a twenty-four hour service. Appliances brought in by hand for repair may even be left with the receptionist in the morning and collected, fully serviced, in the afternoon of the same day.

### Bonus Offers

CHARNWOOD LABORATORIES (a division of Vantorex, Ltd.), Loughborough, Leics. Iron and brewers' yeast. Twelve 2s. size free on order for forty-eight 50's and twenty-four 100's or their equivalent.

FASSETT & JOHNSON, LTD., 86 Clerkwell Road, London, E.C.1. Quickies. Five 1s. 8d. size free with standard pack of 5 doz. 1s. 8d. and 1 doz. 2s. 6d. sizes. Until April 12.

INTERNATIONAL FOOT APPLIANCES, LTD., 345 City Road, London, E.C.1. Omniped foot cushions. Twelve pairs invoiced as ten. Until April 30.

PHARMACEUTICAL SPECIALITIES (MAY & BAKER), LTD., Dagenham, Essex. Avomine tablets (10's); Anthical cream (25 gm.) and Anthisan cream (25 gm). Ten invoiced as nine. Brolene eye ointment (5 gm.) and M. & B. antiseptic cream (Propamidine). Ten invoiced as nine (new terms).

## INFORMATION WANTED

The Editor would appreciate information about :  
Quick-Wate tablets. Pexotone  
Alco-Ectolin Tabryn  
Bio-Rhuma tablets

## IN PARLIAMENT

BY A MEMBER OF THE PRESS GALLERY, HOUSE OF COMMONS

IN the House of Lords on March 20 LORD DOUGLAS drew attention to the increasing dangers to health and life arising from the contamination of food, air and water by toxic chemicals used in agriculture, in food poisoning, in drugs, in industry and in the home. He said it was now necessary to face not an occasional and perhaps transient dose of poison accidentally in some article of food, but the persistent and continuous poisoning of the whole environment. He wanted to know the rate of increase of the usage of pesticides and the extent to which toxic chemicals were being stored and accumulated in the human body. American production of pesticides was estimated to be about 1,000 million lb. in weight (5.6 lb. per head of population), labelled, and the purchaser was often not aware that he was handling a dangerous substance. Aerosols, too, were being used for all kinds of purposes such as for applying hair setting lotions, and such sprays might be inhaled or might penetrate the skin. Cosmetics contained dyes that could be swallowed from the lips. New synthetic substances were being continually invented. "We may assume that most... are inert... but have we any positive assurance of this?" It was well known that DDT and other chlorinated hydrocarbons and the organophosphorous insecticides were nerve poisons. "Perhaps it is significant that in this country hundreds of millions of tranquillisers and sleeping pills are being prescribed and taken every year. These things account for a large proportion of the prescriptions written; and it is also a question whether many of these drugs are not in the long run themselves detrimental and dangerous." Lord Douglas suggested that the use of artificial substances in foodstuffs should be prohibited unless it was proved that they were safe. Far more attention should be paid to research into the biological control of pests, and there ought to be a permanent organisation capable of finding out the facts about food additives and other toxic chemicals. LORD SHACKLETON made a plea for a proper warning and labelling system on all chemicals used either as insect sprays or in gardens.

VISCOUNT HAILSHAM (Minister for Science) referred to Lord Shackleton's plea for caution in such matters, and agreed with that attitude, provided that for "caution" they were careful not to substitute "timidity." It was apparent that the use of chemicals in agriculture was only a special case of a much wider question: the use by man in almost every field of his activity of increasingly powerful substances whose effects were "sometimes unexpected, occasionally dramatic, and often undesired." The benefits of a scientific and technological society could not be had without some risks. Some of the advances in agricultural production could not have been achieved without chemical sprays and pesticides. A number of the more toxic chemicals were no longer used on an extensive scale, and

aldrin, dieldrin and heptachlor were now controlled. Nothing had been said or written that invalidated the general conclusion of the Sanders report that the great majority of chemicals and fungicides, insecticides and herbicides, on farms and orchards had no apparent deleterious effects on wild life. It was also the view of the Medical Research Council that there was no evidence of death or illness attributable to toxic chemical residues entering the market in food, and no evidence of chronic effects from ingestion of traces of pesticides in food. The Agricultural Research Council was supporting research on many aspects of pesticides, and the Government was aware of the need for constant vigilance and constant endeavour to extend the frontiers of knowledge.

LORD HURCOMB supported the plea for a much clearer labelling on toxic chemicals, and suggested that all manufacturers and vendors should take steps to warn their customers of the risks of using the compounds and especially of the cumulative effect of repeated small doses. BARONESS SUMMERSKILL said it seemed that something like 500 pesticides were on the market. She wondered if the testing were inadequate as, or even more inadequate than, the hundreds of drugs put on the market for human consumption. She made another plea for an independent authority to examine pesticides, fertilisers and materials containing toxic chemicals, and for an independent authority to examine drugs made and sold for human consumption. A number of speakers referred to the book "Silent Spring" by Rachel Carson, and some said that they were disturbed and impressed by what appeared to be a well documented case. THE EARL OF HUNTINGDON asked that the toxic chemicals should be controlled. Many should be forbidden, because others less toxic still did the job effectively. LORD MILVERTON pointed out that to stimulate the sale of pyrethrum would both protect the health of people in the United Kingdom and assist the economy of Kenya and Tanganyika. LORD TAYLOR spoke of the extreme difficulty of assessing toxicity, especially from small amounts of compounds. Individual susceptibility to certain compounds created special problems. LORD SEMPILL referred to the Birmingham drug testing scheme which he said, "stands out not only ahead of all others but is unique." It merited adoption as a national instrument.

LORD CHORLEY then suggested that the time had come for legal responsibility to be placed on the shoulders of those who brought out new insecticides and pesticides, making them answerable in damages for anything that might supervene from their use. LORD COLERAINE, having declared his commercial interests in the toxic substances under discussion, considered that on one side there were risks that could not be defined and on the other side positive and known benefits that had been achieved. He believed that the industry as a whole was conscious of the dangers of

distributing toxic chemicals, though he did not deny the need for further education and regulations. He promised no obstruction, but only co-operation, from the industry.

### DESTRUCTION OF VERMIN

MR. J. J. THORPE asked the Secretary of State for the Home Department what tests had been made by his department to ensure that unnecessary suffering was not caused by use of the poisons known as 1080, phosphorus and red squill, respectively, in the destruction of vermin; and whether he would make an order substituting warfarin for such poisons. MR. H. BROOKE (Home Secretary), in a written reply on March 21, stated that his department had no facilities for carrying out such tests. He had, however, consulted all those bodies which had an interest in the problem, including the veterinary and animal welfare organisations, about the regulations to be made under the Animals (Cruel Poisons) Act, 1962. He was considering, in the light of their views, which poisons should be included in the regulations.

## LEGAL REPORTS

### Drinamyl Tablets to "Mind"

STOPPED by police officers in Cross Street, London, N.1, on March 18, a counter-hand was searched and a bottle, containing ninety Drinamyl tablets, was found on him. Asked for an explanation, the man (Carmelo Brincat) said that, about half an hour earlier, an Irishman whom he did not know had given him the tablets and asked him to "mind" them till he returned. At Old Street magistrates' court the following day, Brincat pleaded guilty to a charge of possessing the tablets. "suspected stolen or unlawfully obtained." Remanding him on bail till March 26, the magistrate said "You can't do yourself any harm by helping the officer so far as you can, so that I can see the extent of the gravity of this matter. If it is possible to deal with you leniently I shall do so." A police officer said he understood that Brincat might be able to uncover a source from which the tablets were obtained.

## COMPANY NEWS

Previous year's figures in parentheses

F. W. BERK & CO., LTD. — Dr. F. C. Lloyd, B.Sc., F.R.I.C., has been appointed a director.

ALBRIGHT & WILSON, LTD. — Messrs. J. C. Wilson and R. E. Threlfall are retiring from the board on April 25.

JOSEPH CROSFIELD & SONS, LTD.—(Subsidiary of Unilever, Ltd.)—Net profit for 1962, £727,255 (£834,199), and dividend on Ordinary £587,904 (£694,849).

C. E. RAMSDEN & CO., LTD.—Profit for 1962, before tax, is £81,012 (£68,045); dividend, 40 per cent. (30 per cent.). A three-for-one scrip issue is proposed.

WILLIAM WARNE. (HOLDINGS), LTD.—Ordinary dividend for 1962 is held at 25 per cent. with an unchanged 17½ per cent. final. Provisional group

pre-tax profits amount to £368,000 (£527,000), after charging depreciation of £100,000 (£90,000). Tax takes £160,000 (£258,000), leaving the net balance at £208,000 (£269,000).

**ELI LILLY & CO., Indianapolis, U.S.A.**—Consolidated sales in 1962 were \$21.3 millions (\$198.1 millions). Net income was \$25.5 millions (\$23 millions). Total dividend for year was \$2.50 per share (same).

**F. W. HAMPSHIRE & CO., LTD.**—Group net profit for 1962, £126,697 (£103,045 for fifty-six weeks) and dividend 37½ per cent. (35), as published (C. & D., March 2, p. 224). It is proposed to increase proportion of year's dividend paid out as interim. Directors intend further to expand trading activities by the acquisition of suitable businesses and by development of new products.

**KONINKLIJKE ZWANENBERG-ORGANON, Holland.**—A dividend for 1962 of 17 per cent. in cash plus 3 per cent. in stock from capital surplus reserve is declared. (In 1961, 17 per cent. cash.) It is also announced that the company has acquired ECHFA of Enschede, producers of alkaline-free detergents and materials for the textile finishing industry. The take-over was effected through a nominal Fls.370,000 Zwanenberg-Organon share exchange, whose present market value is in the order of Fls.3 millions (£300,000).

**CHEMISCHE FABRIEK NAARDEN, Holland.**—The company is reported to be taking over a well-established manufacturer of essential oils and other food processing materials at Yokohama, Japan. From April 1, that (unnamed) company will be managed through Naarden's existing subsidiary in Tokyo. At the same time the management state that events have confirmed their optimistic forecast for 1962 and the group sales and profits have both risen by more than 10 per cent. The favourable trend continues in 1963. Order books were much longer at the beginning of this year than at any previous time, it is added.

**F. W. BERK & CO., LTD.**—Subject to audit, consolidated profit, after all charges, but before taxation, for 1962, amounts to £541,510 (£617,470) and after taxation to £277,020 (£287,900). Contrary to the anticipated improvement to which the first half of the year gave promise, trading conditions deteriorated during the second half and margins narrowed. Prospects for the current year indicate an improvement but the position is clouded by the adverse effect of recent weather conditions. The board recommends a final dividend of 5½d. per share, making a total of 8½d. for the year (same). Arrangements are in hand for the placing of an issue of £1,250,000 debenture stock.

**JOHN AND E. STURGE, LTD.**—Total dividend for 1962 is 5 per cent. (against 8 per cent.). The directors state that the serious reduction in the profitability of group operations led to reduced earnings of £124,955 (against £193,469) by the parent company. After tax of £59,501 (£87,674), the parent's net profit is £65,904 (£105,795). A tax credit of £1,903 (£7,428) increases the net

profit to £67,807 (£113,223). The group, however, incurred a deficit of £21,280, compared with a previous surplus of £52,623. Particularly adverse conditions in overseas markets, coupled with interruption of production during works alterations and development, resulted in a combined trading loss of £85,732, against £37,712 in 1961. Serious trading losses of overseas subsidiaries have necessitated drastic remedial action in the group's operations in Canada and France. The greater part of the reduction in the parent's earnings occurred before October 1962 and the improvement in trading conditions foreshadowed in the interim statement continues to develop. The tonnage volume of the parent's sales was higher than in 1961, but with seriously reduced selling prices turnover was slightly lower.

**MONSANTO CHEMICALS, LTD.**—Sir Miles Thomas in his chairman's statement, accompanying the accounts for 1962, states that the company continued to be faced with mounting competition in 1962, stemming primarily from the continuing existence of substantial over-capacity in world chemical industry. Such chemicals as phenol and phthalic and maleic anhydride were particularly affected. So were the major plastics. In spite of prevailing conditions the company's share of the commodity chemical market was maintained, and the physical volume of its sales increased. Every aspect of the company's operations in that field is being examined in order to improve the short and longer term positions. Fine and pharmaceutical chemicals made a rather better showing, though here it was necessary in some instances to reduce prices to retain business. Intensified foreign competition was experienced in the home market, but it was possible to obtain a satisfactory share of new export business. New plants were commissioned for the manufacture of salicylates and phenacetin, and the construction of a new aspirin plant has begun. It will produce a new granulated product that can be more easily tabulated. Total expenditure on capital projects during the year amounted to £1,670,671. The company is "encouraged by its progress in 1962"; many of the measures taken during the year should have a lasting effect on its internal economy. (For accounts and dividend, see C. & D., March 2, p. 224.)

**THE** boards of Liebig's Extract of Meat Co. and of its principal subsidiary, Oxo, Ltd., announce that Mr. T. A. H. Sycamore has been appointed an executive director of the Liebig's Extract of Meat Co. and Mr. J. S. Hendrick (previously marketing director of Oxo) has been appointed managing director of Oxo in succession to Mr. T. A. H. Sycamore, who is relinquishing the post on joining the board of the parent company. Mr. Sycamore remains a director of Oxo.

## NEW COMPANIES

P.C. = Private Company. R.O. = Registered Office

**ASHFIELD'S (CHEMISTS), LTD. (P.C.)**—Capital £10,000. To acquire the business of chemists carried on at 28 High Street, Rye, Flints. Directors: Herbert Roberts, John N. Roberts, M.P.S., and Blodwen Roberts.

**B. T. BINGHAM, LTD. (P.C.)**—Capital £100. To carry on the business of selling agents and consultants to the pharmaceutical chemical trades,

etc. Directors: Beverley T. Bingham, M.P.S., and Thomas F. Bingham, M.P.S. R.O.: 13 Grove Avenue, Costessey, Norwich.

**BRITISH CHEMOTHERAPEUTIC PRODUCTS (EXPORTS), LTD.**—Capital £100. To carry on the business of chemists, druggists, perfumers, etc. Directors: George W. Taylor, M.P.S., and Elizabeth H. Taylor. R.O.: 10 Grant Street, Bradford.

**H. HOWARD & CO. (HORNSEY), LTD. (P.C.)**—Capital £100. To carry on the business of chemists, etc. Directors: Charles C. Keogh and John E. Padley, M.P.S. R.O.: 9 Chequers Way, London, N.13.

**E. H. LLOYD (HOVE), LTD. (P.C.)**—Capital £4,000. To acquire the business of a dispensing chemist carried on by Edward H. Lloyd, at Hove, 4, etc. Directors: Edward H. Lloyd, M.P.S., and Helen J. A. Lloyd. R.O.: 10 Queens Parade, Hove, 4.

**G. & M. MATCHETT, LTD. (P.C.)**—Capital £100. To carry on the business of manufacturing and dispensing chemists and as dealers in chemicals, etc. Directors: Graham L. Matchett, M.P.S., and Mary W. Matchett, M.P.S. R.O.: 99 Old Shoreham Road, Hove, 4, Sussex.

**I. L. ROBINSON, LTD. (P.C.)**—Capital £10,000. To carry on the business of chemists and druggists, etc. Directors: Ivor L. Robson, M.P.S., Helen N. M. Robson, John L. Robson and Nigel G. L. Robson. R.O.: 46 Warwick Road, Carlisle.

## BUSINESS CHANGES

**J. & E. ATKINSON, LTD.**, have removed to 17 Bessemer Road, Welwyn Garden City, Herts (telephone: Welwyn Garden 21111).

**ELI LILLY INTERNATIONAL CORPORATION** are opening a London office at Henrietta House, Henrietta Place, W.1, which will serve as a headquarters unit for all Lilly operations in the United Kingdom, Europe, the Middle East and North Africa.

## Appointments

**THE Warner-Hudnut-Lambert group of companies, Eastleigh, Hants, have appointed Mr. H. D. Dammers director of their toiletries division.**

**MOORE MEDICINAL PRODUCTS, LTD.**, P.O. Box No. 78, Aberdeen, have appointed Mr. David Flett, M.P.S., their general manager.

**REXALL DRUG CO.**, Loughborough, Leics, have appointed Mr. Walter Clarke their United Kingdom marketing manager. Mr. Clarke has been home sales manager for the past two years.

**KIMBERLY-CLARK, LTD.**, Larkfield, Maidstone, have appointed Mr. J. G. Hiles their northern area manager; Mr. Brian Coulter, divisional manager, south-west division; and Mr. John Woolnough, supervisor, London north division.

## PERSONALITIES

**MRS. H. S. BROCKLEHURST, J.P., M.P.S.**, has been reappointed a member of the Leeds Regional Hospital Board for a further three years from April 1 and reappointed chairman, Hull (A) Group Hospital Management Committee.

**MR. R. THOMAS**, who is manager of the George Street, Pontypool, branch of Boots, Ltd., has been elected president of Pontypool chamber of trade.

**MR. S. HALL**, who has been manager of the Bodmin, Cornwall, branch of Boots, Ltd., for twenty-nine years, has retired. Mr. Hall is a former chair-

man of the Cornish Branch of the Pharmaceutical Society.

MISS G. M. ALBUTT, pricing superintendent of No. 2 Pricing Bureau, retires at the end of March. Miss Allbutt became pricing superintendent of the old West Midlands Pricing Bureau in 1944.

MR. W. H. GREEN, M.P.S., has been invited by the South-east Metropolitan Regional Hospital Board to continue his membership of the Greenwich and Deptford Hospital Management Committee for a further term of three years from April 1.

DR. G. GUTMANN, a Sydney, Australia, research worker, has been awarded an American grant of \$24,550 (£11,000) to carry on his inquiries into personality-changing substances, including the tranquilliser drugs. Dr. Gutmann is senior lecturer in the Department of Physical Chemistry at the University of New South Wales. The grant has been made by the American National Institute of Mental Health, a United States Government Agency.

MISS CONNIE R. JENNINGS, M.P.S., chief pharmacist at King George Hospital, Ilford, Essex, is retiring on March 31. Qualifying in 1930, Miss Jennings joined the hospital in the same year, when it was still an emergency hospital. When the new King George Hospital was opened in 1931, she became the first pharmacist at the hospital and was presented to King George V at the opening ceremony. She has been instrumental in planning a pharmaceutical wing at the new Barking Hospital and a new department at King George Hospital.

MR. A. SINCLAIR (superintendent pharmacist, Hamilton Central Co-operative Society, Ltd., Lanarks) has been reappointed to the standing Pharmaceutical Advisory Committee for a second period of three years. A native of Midlothian, Mr. Sinclair worked in Helensburgh, Greenock, Kilmarnock, Johnstone, and Lockerbie before joining Hamilton Co-operative about fifteen years ago. For several years he acted as secretary of the Scottish Co-operative Chemists' Association, and in 1948 was a member of the Lanarkshire Pharmaceutical Committee.

## OVERSEAS VISITS

MR. L. W. H. HILL (director, Optrex (Overseas), Ltd.), is visiting the West Indies and Panama during April and May where he is to meet the company's agents in the various territories.

## DEATHS

DOWNING. — On March 12, Mr. Eldred Percy Downing, M.P.S., c/o C. E. Downing, Parthenay, Heathrow Road, Welwyn, Herts. Mr. Downing qualified in 1902.

GAUBERT. — On March 6, Mr. Percival Stephen Gaubert, M.P.S., 23 The Gardens, Watford, Herts. Mr. Gaubert qualified in 1904 and retired in 1952.

PAUL. — On March 6, Mr. Robert Paul, M.P.S., Rosealee Lodge, Hawick, Roxburghs. Mr. Paul qualified in 1936.

## Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

### An Unfilial Reply

SIR,—I was appalled by Mr. Phillips's letter (*C. & D.*, March 2, p. 230). For smug self-satisfaction it would be hard to beat. I can assure this "helpful fatherly figure" that he will get a short sharp unfilial reply if he ever writes to me. Mr. Phillips appears to have contracted the disease with which the Council of the Society has been afflicted for many years, that is, the delusion that its chief function is to tell us what we should not do instead of confining itself to doing things for us which we cannot conveniently do ourselves. Mr. Phillips might do well to remember that there is little to choose between those who abuse an authority they possess and those who assume an authority they do not possess. The hard work Mr. Phillips puts into *News and Views* might well be overlooked if he were to overstep the mark in other directions.

C. LONSDALE,  
Sturminster Newton, Dorset

### Cut-price Antibiotics

SIR,—Yet another circular has been sent to retail chemists advertising cut-price antibiotics. I sincerely hope that all pharmacists will ignore such circulars for the following reasons:

1. The well-established firms are far more likely to support the pharmacist in the case of price reduction or out-of-date stock.
2. If chemists do buy cut-price antibiotics, the net result will be a reduction in the basic N.H.S. price, as witnessed recently in the case of penicillin V.
3. It is only fair that we should support those pharmaceutical firms that carry out the research and development of the drugs.
4. An economic consideration—the actual saving is surprisingly small, since payment must be made within fourteen days to obtain the low price, whereas one or two months' elapse before statements of "ethical" houses become due, by which time N.H.S. payment for the drugs has usually been received.

If we buy cut-price drugs we are undermining our own foundations. It is comparable with buying cut-price toilet rolls at the supermarket for resale in the pharmacy, because it is the cheapest price obtainable.

J. V. TAPSTER,  
Watford, Herts

### Testimonial

SIR,—May I appeal to fellow members to give full support to Mr. Keith Jenkins, Bovingdon, for the text of his letter outlining "Four Conditions for Survival." I had the pleasure of sitting opposite to him at lunch during the annual meeting last year and, after a very enjoyable meal-time, resumed with the impression "a very level-headed gentleman, who would be an asset to the Council."

ALEX G. MURDOCH,  
Mintlaw, Aberdeens

### Conditions for Survival

SIR,—It is a pity that Mr. Keith Jenkins ruins a perfectly good argument for a minimum fee by coupling it with limitation of pharmacies on a basis of N.H.S. dispensing. One could hardly limit solicitors on the basis of the number of their appearances in court, or the number of surgeons on the basis of the number of operations per week. Many pharmacies, particularly in city centres, provide a good pharmaceutical service with a small N.H.S. figure. In fact some quite profitable pharmacies do no N.H.S. dispensing at all. Who can say which is to close down? The only argument for a sound dispensing fee is "scarcity value." The pharmacist is organised to dispense prescriptions as and when required by the patient, not when it suits convenience. "Endless-belt" dispensing is unknown to the majority of pharmacies. "They also serve who only stand and wait."

ERNEST DARLEY,  
Barking, Essex

SIR,—Concerning the first of Mr. Jenkins' four urgent steps I should like to ask the following questions:

- (a) Am I correct in assuming he is a proprietor pharmacist?
- (b) How many prescriptions per month does he dispense?
- (c) If the answer is between 1,000 and 2,000 or more, should he not have declared that so that we can judge his motives accordingly?
- (d) If the answer is less than 1,000, will he tell us in what manner he anticipates the limitation will be effected; with what feelings he views the future closing of his pharmacy; how he would expect to be compensated; and if so, who would pay the compensation?

So that my motives are clear I state that I would be adversely affected by such a proposal and, not unnaturally, would like to know exactly how it would be carried out.

O. DUFFELEN,  
Scunthorpe, Lincs

### Negotiations Over Salaries

SIR,—Mr. Moss (chairman of the Central N.H.S. (Chemist Contractors) Committee), at a meeting in Newcastle last week made critical reference to an article by E. C. Tenner which appeared in the *C. & D.*, March 16 (p. 284). He stated that the article was "irresponsible and misleading." He quoted from E. C. Tenner: "Mr. Wright does not mention that his side must have advocated much lower figures than the trade unions, resulting in the unrealistic rates that have emerged." Mr. Moss denied that, backing up his argument with the statement that "the trade unions had not even asked for an increase in salary rates. All they proposed was increased overtime rates and rota fees." So E. C. Tenner was dismissed, and those of us at the meeting who had intended to argue E. C. Tenner's line were flattened. A masterly

performance from Mr. Moss, but based on arguments that were false! What is the true picture? Some time ago the negotiations in the J.I.C. pipe-line were concerned with overtime rates and rota fees. Then the trade unions received an offer from the employers side offering a new scale. That is as far as the truth of Mr. Moss's state-

ment goes, because there were negotiations on that salary scale. Is it not true, Mr. Moss, that the first offer to the unions contained a provincial terminal rate of £850 per annum? And did the unions not counter with requests that the figure should be raised to £1,000 per annum, with corresponding rises all along the line for other

higher rates? Did the employers not counter with an offer of £900 per annum? And out of those negotiations, which you denied had taken place, did not the figure of £950 appear in the J.I.C. scale as the provincial terminal rate?

J. P. KERR.  
Newcastle-on-Tyne

## TESTING FOR SUBSTANDARD DRUGS

### Analysts in disagreement as to the most appropriate methods

SIR.—In Mr. Stock's recent address on the quality control of drugs (*C. & D.*, March 16, p. 287) he apparently made some very damaging remarks about independent consulting analysts. He is reported as saying that the term "independent" might fairly be defined as independent to act either for the consumer or for the manufacturer, and he further refers to a number of such "commercial analysts." This can only mean that those analysts are not giving an impartial opinion. Such allegations are scurrilous and malicious and completely without foundation. Mr. Stock should withdraw these statements and make a full apology to members of a profession whose integrity is beyond reproach. It appears that Mr. Stock would leave toxicity testing to the manufacturer without any independent check, yet for quality control he would have checking carried out by his independent authority. That, surely, is most irrational in view of the thalidomide tragedy, which he persists in bringing into any remarks he makes on quality control of drugs. Mr. Stock's reference to the Pharmaceutical Society and its inspectors carrying out tests on retail pharmacists is altogether too naive, and as for his remarks on "furtive" testing, I can only conclude that he is playing to the gallery. He repeats that, in over six years, there has not been a prosecution of a pharmacist in Birmingham. If that statement is intended to imply that the Birmingham pharmacists have a better record for dispensing than the pharmacists in the rest of the country, then it is not true. The Ministry of Health testing scheme will show a similar percentage of faults in Birmingham as elsewhere, and if the Birmingham authorities wished to prosecute, then they appear to have grounds for doing so, as for example, in the case of benzocaine lozenges found 18 per cent. deficient in benzocaine, and reported in the Birmingham city analyst's report for the fourth quarter of 1962. Mr. Stock states that the pharmacist is just as interested as the consumer in safeguarding quality. Surely no one doubts that, but does anyone doubt that the manufacturer is equally as concerned? Any manufacturer who hopes to run a business by selling substandard drugs will not remain in business for long. Much of Mr. Stock's article is directed against the manufacturers of so-called "cheap" drugs, and he seems to be trying to create the impression that, because they are cheap, those drugs must be substandard. It is noteworthy that he has not commented on the quality of the cheap tetracycline products, for the very good reason that their quality is first-

class. In my opinion it is not cheap drugs that the consumer need fear, but rather the cheap system of testing at present in force, namely, the Ministry of Health testing scheme and testing by local authorities under the Food and Drugs Act. Enlightened opinion is that the amount of money spent on testing drugs for the protection of the consumer is ludicrously inadequate, but that is not to say there is anything wrong with the present system of testing. Mr. Stock's scheme, in addition to incurring a vast capital outlay on regional laboratories, would cost at least £½ million a year to operate. The present system of drug testing in this country could be expanded tenfold for that amount of money, could also include the control of hospital drugs and would in my opinion give the consumer better protection than the scheme he has put forward. Although he would have us believe that investigational sampling would be in the best interests of the consumer, I am convinced that is not so. Statistical evidence could be produced which would show random sampling to be far superior. Mr. Stock is of the opinion that an inherent control system is essential for the efficient quality control of drugs. That I disagree with entirely. An independent consultant could equally well carry out sampling and testing of raw materials, intermediate and finished products, for manufacturers not possessing their own control laboratories. That some manufacturers have neither of those alternatives is to be deplored, but it is certainly not the fault of the consulting analyst. Whatever the system of quality control, be it efficient or otherwise, any institution buying drugs or any other commodity on contract would certainly carry out periodical checks to ensure that the material supplied was in accordance with the agreed specification. Mr. Stock is indeed fortunate in working for a local authority prepared to spend relatively large sums of money on drug testing. He has in consequence found fault with the products of a number of manufacturers. What he has altogether failed to do is to give a truly scientific appraisal of the various systems for the quality control of drugs.

H. C. MACFARLANE, Principal,  
HARRISON & SELF,  
Godalming, Surrey

SIR.—There is no doubt that the Ministry of Health is perfectly capable of defending itself without the aid of Mr. E. A. Cross (see *C. & D.*, March 23, p. 307) always provided, of course, that it has a defence. Mr. Cross's reference to the subject of substandard capsules is a little puzzling, for my address sta-

ted: "I would place on record that all the relevant facts were brought to the attention of the Controller of Supplies at the Ministry of Health in the period June-July 1962. The variations in capsule contents disclosed could be classified as clinically significant, yet apparently no action was taken by the Ministry to have this objectionable material removed from hospitals." Accordingly the responsibility for any lack of action rests with the Ministry and not with me. Mr. Cross does not, and cannot, deny that substandard penicillin-V tablets were used in the South-west Metropolitan Region. The Government Laboratory has confirmed that. Hence the facilities in the region referred to for avoiding that eventuality are ineffectual, and Mr. Cross would be well advised to rely on firms having a good inherent analytical control rather than of the "pieces of paper" that have so patently let him down. The tablets of the firms concerned have now been examined by three expert industrial laboratories, in addition to the Birmingham and Government laboratories. All five laboratories have no difficulty in agreeing that the tablets are substandard, the basic conclusion being that the tablets were prepared to contain 250 and 125 mgm. of the potassium salt and not the free acid as required by the B.P. Addendum; potassium determinations on three different batches confirmed that. Biological assay and spectrophotometry also confirm the substandard nature of the material. The really disturbing feature of Mr. Cross's letters is that he now states that he was in communication with the manufacturers concerning the quality of the tablets. Surely our information, plus the immediate recall of material from retail sources, should have prompted him to withdraw those tablets forthwith from use in the hospitals of his region until the Government chemist had made known his findings. According to my information, contained in a letter from the Ministry commencing "I am directed by the Minister of Health . . .", those substandard tablets had been "used up" and not withdrawn. In view of Mr. Cross's further information I believe that to be completely indefensible. If Mr. Cross continues his attempts to justify the use of substandard material in the hospitals of his region, there would seem to me to be a distinct probability that hospital authorities will come to entertain the most reasonable doubts as to the wisdom of allowing group purchasing schemes to continue to operate as at present.

FRANK G. STOCK,  
City of Birmingham Analytical  
Laboratories



# The CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

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## No Self-medication During Pregnancy

In the United Kingdom 2 per cent. of all live births exhibit some degree of congenital malformation, and that high figure has altered little over recent years. The factors responsible are probably multitudinous—some genetic, some extraneous, others containing an element of both. Recently the problem has become heightened by the realisation that some drugs have teratogenic effects. It is becoming more and more apparent that the placental barrier, which was formerly thought a protection for the human foetus, is not proof against penetration.

The announcement last week (see *C. & D.*, March 23, p. 298) by the Wellcome Foundation, Ltd., gave an indication that, when massive doses of cyclizine are given to laboratory animals, a small proportion of their progeny are born deformed. When, however, normal doses are given, no similar effect is obtained. Those findings are examples of the problems that have arisen in recent research work on the teratogenic effects of drugs, and they highlight the twin difficulties of assessing the results obtained with laboratory animals and of extending those assessments to indicate possible effects in the human.

We understand that, on the particular drug cyclizine, work has been carried out both in the manufacturers' laboratories and in those of the Department of Embryology in Paris. The results show that cyclizine, given at a dose level of 25-75 mgm./kilo can produce teratogenic effects in about 10 per cent. of rats, rabbits and mice (the recommended dose in man being 1 mgm./kilo). The abnormalities noted were various and not, as with thalidomide, consistent in pattern.

The significance of the animal tests in relation to possible effects in humans is not yet understood, and many more clinical experiments, and much more research, will be needed before the problem is solved. In the present state of knowledge the possibility of some risk in humans, even though present indications are that it is slight, cannot be entirely discounted. Hence the steps taken by the principal British manufacturer.

Somewhat similar reports have unfortunately been rendering suspect certain other drugs widely used by the public, among them sodium salicylate, imipramine and caffeine. As more tests on laboratory animals become completed, and more and more drugs come to be investigated, an increasing number are likely to fall within the group of substances shown, under extreme laboratory conditions, to be capable of producing congenital

defects. The problem is thus likely to concern more and more manufacturers as experience develops.

It is necessary, then, to view the situation as broadly as possible, in order to see it in balanced perspective. In an attempt to do that it is possible, in the case of cyclizine, to fasten on two reassuring aspects.

In the United States of America, where appropriate records are available, the community may be said to have been "exposed to" cyclizine for a period of seven or eight years. In 1950, before the drug was sold, the number of still-born births associated with congenital malformations was 5.09 per thousand. In 1959, after the drug had been marketed for seven years, the figure was actually lower, at 5.05. During that period the pattern of different foetal abnormalities associated with still-births had not noticeably changed.

To return to the United Kingdom there has been in Birmingham, where accurate records of congenital malformations have been kept since 1950, a gradual decline in the incidence of malformations recorded from 8 per 1,000 in 1952 to 6.6 per 1,000 in 1961. The evidence also appears to confirm that cyclizine is not like thalidomide in its effect.

It is in such problems as are here under discussion that the pharmacist has the opportunity to utilise in full measure his professional training and attributes. He can guide members of the public who seek his advice, and in the present state of knowledge it is our suggestion that he should counsel all who are pregnant not to take drugs of any sort except under medical advice. Present circumstances are eminently suitable for bringing home to the public the truth of the argument that medicines are not ordinary articles of commerce.

## HOSPITAL PHARMACY FORUM PROFESSIONALISM

**S**URELY there can only be one subject of talking, postulation, invective, and lament for pharmacy amongst hospital pharmacists—the new N.J.I.C. retail pharmacy agreement. It would seem that those who have agreed that the new scales (see *C. & D.*, February 23, p. 188) are realistic for pharmacists in general practice must either have two sides, wear two caps, run with the hare and hounds, never read the situations-vacant or pharmacists-required columns of the Press, or care too little for the profession.

Who are these people who seem, in the Council of the Society, to talk of a profession, with all its implications, and of a just reward for such professionalism—and by inference accept the report of the Committee on the General Practice of Pharmacy—and then, in other executive bodies, and on the management side of the N.J.I.C., allow "business" to reign supreme, with the little shop round the corner becoming paramount? How now professionalism? To the wall? Many pharmacists are becoming conscious that the same people are saying two things in two different places, and that "never the twain shall meet." Business seems to be taking over the profession, and that is not in the best interests of the profession. It is also against the declared interests of members (*vide* Birmingham special and annual meetings of the Pharmaceutical Society, 1962). A question posed above: "Who are these people?" is already being asked by hospital pharmacists, and some of our general-practice colleagues are having stirrings of conscience. A timely warning may therefore not be amiss. Let it be stated once and for all that hospital pharmacy stands in the front rank of professionalism. It believes that there is a future for a pharmacist with a completely professional outlook, and it considers it has been blazing the professional path for decades. A little help now from general-practice

colleagues would have made the difficult path just that little lighter. For—make no mistake—what happens to hospital pharmacy will reflect on general practice, and *vice versa*, as sure as Galen gave name to galenicals. Must we continue to "go it alone"? It is to be hoped not. Examining the claim of "realistic" for the agreed rates, one may quote the dictionary definition of "realistic" as being an adjective from real: "actually existing or occurring in fact." Having read all the comments, scanned the situations-vacant column and seen all the "perks" offered, can the negotiators of the award still assert that the new agreement is realistic and in the best interests of the profession? Get with it, gentlemen!

### Dispensing Assistants

Most hospital pharmacists should have seen by now the "H.M." concerning dispensing assistants. Like it or not, many operations do not need the attention of a pharma-

cist, apart from general oversight and supervision. Someone has to do those 1,001 jobs that only require a pharmacist to lay down the pattern and check the vital parts of the job. Opportunity is given, under the H.M., to train persons to undertake those tasks, and to provide at the end of the training the opportunity to acquire a certificate of a learned Society. In one respect the H.M. only puts dispensing assistants in a similar position to practically every other group of hospital officers, in that up to one day per week may be taken for training, and expenses paid for fees, books, etc. It is often said that clerical staff have all the privileges, but here at least is one parapharmaceutical (or one technical) group that has the same privileges of in-scheme training. It only remains for those concerned to raise the level of salaries of dispensing assistants to those of the similarly privileged clerical staff in order to make conditions much more realistic—which returns full circle to the beginning of this little piece—the N.J.I.C. scales.

## Pharmaceutical Society of Northern Ireland

### MONTHLY MEETING OF COUNCIL

A MINISTRY of Home Affairs memorandum on pharmacy administration for 1962 was received by the Council of the Pharmaceutical Society of Northern Ireland at its monthly meeting held in Belfast on March 21, the president (Mr. D. Moore) in the chair.

The memorandum contained an analysis of the numbers on the register at December 31, 1960, 1961 and 1962:—

	1960	1961	1962
Pharmaceutical chemists ... ...	1,180	1,166	1,165
Superintendents of bodies corporate (Ph.C.) ... ... ...	161	167	169
Registered druggists ... ... ...	21	19	17
Superintendents of bodies corporate (R.D.) ... ... ...	1	1	—
Apprentices ... ... ...	203	183	150

The numbers of licences issued in respect of the years ended December 31, 1960, 1961 and 1962 were:—

	1960	1961	1962
Pharmaceutical chemists ... ...	747	744	744
Registered druggists ... ...	12	10	9

Thirty-five apprentices qualified by examination as pharmaceutical chemists and were registered as such during 1962; 220 pharmaceutical chemist licences were issued to bodies corporate and twenty-two to executors.

A letter from the Ministry of Education expressed pleasure that the Council was taking steps to include the Northern Ireland General Certificate of Education examination in the list of examinations recognised for the purpose of registration as a student of the Society.

The Ministry of Home Affairs wrote affirming that the Minister had approved the appointment of the examiners nominated by the Council for the purpose of the Society's examinations to be held during the year 1963 and, in a further letter, informing the Council that regulations to enable one further examination for old-syllabus candidates had been signed by the Minister. Those regulations would shortly be available at H.M. Stationery Office.

The president of the Society of Pharmaceutical Students, in a letter to the Council, asked for financial assistance to cover the cost incurred by a party of students who intended to make an educational visit to London in April. MR. R. J. DAVIDSON told the meeting that difficulties had arisen which necessitated postponing the visit. It was agreed to defer consideration of the matter.

A letter from Mr. W. K. Fitch (editor-manager of *Journal Mondial de Pharmacie*) was also read. THE SECRETARY (Mr. W. Gorman) pointed out that Mr. Fitch was anxious that as many members as possible in Northern Ireland should become subscribers to the journal, and it was agreed to draw their attention to the matter.

An application from Mr. E. J. Stafford, 40 Irwin Crescent, Strandtown, Belfast, 4, for the restoration of his name to the register of pharmaceutical chemists was considered and granted. It was stated that Mr. Stafford had been on the register before leaving for Australia three years ago and that he intended to return there after a vacation in the United Kingdom.

A pamphlet on pharmacy in Israel was exhibited. Another, from the Pharmacy Board of New South Wales, showed that one Northern Ireland pharmacist had gone to the State in 1961 and one in 1962.

THE CHAIRMAN stated that seven old-syllabus candidates taking forensic pharmacy had attended a talk by Mr. J. N. Patterson (chief pharmacy inspector, Ministry of Home Affairs), who had discussed with the students past examination papers. They had requested further talks, and another session had been arranged for April 10.

The report on a meeting of the Finance Committee on March 21, with a recommended expenditure of £2,147 15s., was passed.

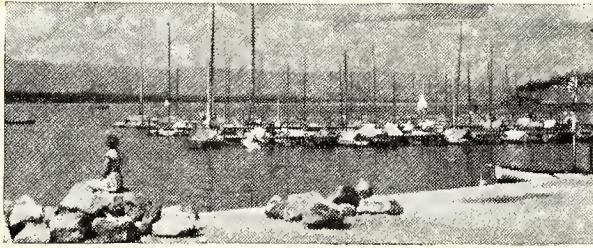
A report on discussion which representatives of the Council had had with officers of the Pharmaceutical Society of Great Britain was received. MR. N. C. COOPER said that they, the Council, could go ahead with the plans for recognising only the degree in pharmaceutics. DR. R. G. R. BACON reported on discussions Mr. Cooper, Dr. Shaw and he had had with Dr. Hamer.

Referring to the Society's current bank overdraft, MR. GORMAN suggested that money belonging to the Society should be transferred from the Belfast Savings Bank to the Ulster Bank. He pointed out that earlier in the month, when £1,130 had been received from the Ministry of Home Affairs for licence fees, the Society had had a bank credit of approximately £600. The bill for £1,870 from James Cairns & Sons, Ltd., builders, for work done, would once more put the Society in "the red." He suggested that Mr. A. T. Hardy should be authorised to contact Messrs. J. Malcolmson, and instruct them to sell securities at times necessitated by the builder's accounts. MR. DONALDSON emphasised that arrangements should be made to enable the securities to be sold when the market was favourable, without bringing each proposed sale before the Council at the monthly meeting. It was decided that Messrs. F. R. Moore and Hardy should be authorised to give the bank permission to sell as and when the necessity arose.

Members present were Messrs. B. Flatley, R. M. Watson, A. T. Hardy, A. Templeton, W. Donaldson, W. C. Tate, H. W. Gamble, W. P. Ewart, N. C. Cooper, J. Gordon, W. T. Hunter, R. J. Davidson, and Dr. R. G. R. Bacon.

Apologies for absence were received from Professor O. L. Wade, and Messrs. F. R. Moore, H. F. Moore, J. Kerr and H. G. Campbell.

# PHOTOGRAPHIC ISSUE



PERHAPS no branch of amateur photography has received such a stimulus during the past decade as 8-mm. cinematography. Advances in emulsion technology, particularly in the colour field, have made colour movie film-making as easy as snapshotting with a box camera. Active competition between manufacturers has resulted in a wide choice of cameras at prices ranging from under £11 upwards. Indeed it is now possible for a customer to equip himself for taking and showing movie films for an outlay of about £30. As yet there is no indication that the potential market is nearing saturation point. In fact its possibilities are receiving the attention of the discount houses and other outlets outside the photographic trade.

The chemist photo-dealer is in a strong position to combat inroads into his business so long as he is prepared to offer a better service, particularly after-sales service, which includes advice and encouragement. That presupposes at least one member of the staff versed in the subject and able to talk from experience.

No longer can professional film technicians stigmatise 8-mm. apparatus as "bootlace," as they did up to a few years ago. There are now available 8-mm. cameras designed and constructed to standards high enough to fit them for highly specialised applications in research and medicine. The small cameras have found favour especi-

ally with ophthalmologists.

But it is with cameras up to the £40-50 bracket and likely to be stocked by the chemist-dealer that the present survey is concerned. A question customers may well ask in the early stages is whether it is reasonable to expect a camera costing just under £11 to be of any real use. If it is, why should prices range up to £200 and more? Obviously the answer lies in the comparison of a box camera with a precision miniature, in the quality and finish of the mechanical parts, the quality of the optics and the extra scope afforded by the provision of special features.

Basically the cine camera is one that makes a series of still pictures in rapid succession—usually at the rate of sixteen per second. Perforated film is used to facilitate the accurate displacement of the film between exposures. For reasons of economy 8-mm. cameras use 16-mm. film, which is passed through the gate twice, half the width being exposed on each run, the reels being reversed after the first run. Then, after processing, the film is slit down the centre and the two lengths joined end-to-end before return to the customer.

During its passage through the camera the film is pulled through the gate



## 8-mm CINE

in a series of jerks, frame by frame, by claws driven by the camera motor through a cam mechanism known as the "intermittent." The quality of the mechanical department of the camera determines the steadiness of the resultant screen image, durability, and absence of damage to film. On that factor depends also, to a large extent, the price.

The customer, in making a choice, will base his decision on a number of factors: how much he is prepared to spend; whether he wants to make films without delving into technicalities; whether he wants to engage in a specialised field that may call for special facilities such as variable speeds and alternative lenses; whether he wants to do close-up work, etc.

### Optics

The simplest cameras are fitted with fixed-focus, non-interchangeable lenses, f/2.7 to f/1.9, with focal lengths between 10 and 13 mm. That short focal length provides sufficient depth of field to enable shots to be made of subjects beyond about 4 ft. distant without the necessity of focusing. Ascending the price scale, there are cameras of better quality with wider aperture, and focusing lenses that can be interchanged for wide-angle or long-focus objectives. The "normal" focal

### —A MARKET THAT IS BY NO MEANS SATURATED

#### ADMIRAL 8 F

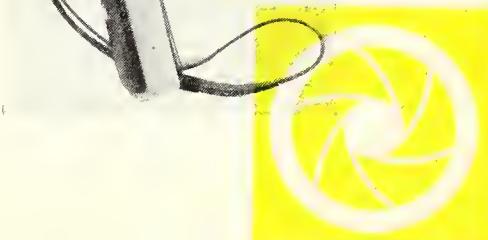
Fixed-focus 12.5-mm. f/2.8 lens; semi-automatic exposure control; single-speed and single-frame trans-



port; sprocket feed; tilting view-finder for parallax compensation; £24 10s. *David Williams*.

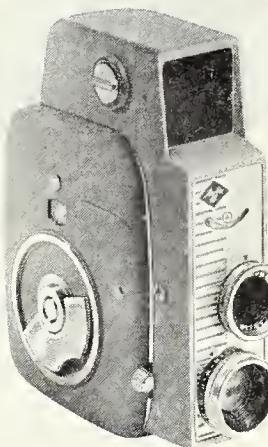
#### AMBASSADOR

Fixed-focus 10-mm. f/2.8 lens; single-speed; supplied with detach-



able pistol grip embodying trigger release; electric motor drive from 4½-volt dry battery; filters stowed in grip; £11 17s. 6d. *Silber*.

**AGFA MOVEX AUTOMATIC**  
Focusing 12-mm. f/1.9 lens; fully automatic exposure control with



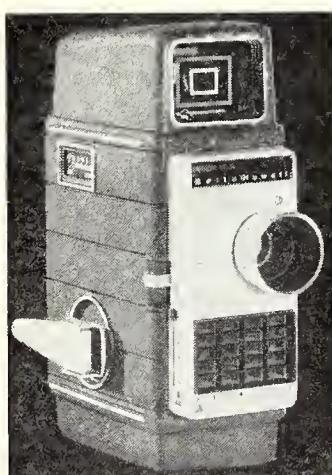
over-ride; single-speed (18 f.p.s.) governed, with cut-out; single frame provision; £39 18s. 3d. *Agfa*.

**BAUER**  
Fixed-focus 13-mm. Schneider Xenoplan f/1.8, single-speed.



single-frame and continuous-run transport; fully automatic exposure control with manual over-ride; pistol grip with release trigger; £39 12s. 6d. *Neville Brown*.

**BELL & HOWELL AUTOSET II**  
Fixed-focus 10-mm. f/1.9 lens; fully automatic exposure control



with manual over-ride; "beacon" warning in finder if light is insufficient; single-speed, single-frame and continuous-run transport; £29 11s. 3d. *Rank*.

length on a cine camera would be long-focus for still cameras, in which the "normal" focal length is approximately equal to the diagonal of the frame. In cine it is about half that. Interchangeability of lenses may be achieved by removal and substitution, or by means of a turret containing two or three lenses and which slides or rotates to bring the required lens into position, sometimes also adjusting the view-finder at the same time. A normal complement of a three-lens turret is a wide-angle (6-mm.), normal (10-13 mm.) and a long-focus (25-mm. or longer) lenses.

More recently there have been appearing cameras fitted with a single lens whose focus may be varied. They are usually referred to as "zoom" lenses, an unfortunate term because it suggests change of image size while the camera is running to produce an effect rather like a "tracking shot" when the camera is rolled towards or away from the subject while running. The "zoom" lens, properly used, should be set for wide or narrow angle before the shot is made. Only rarely should the focal length be altered while the camera is running. The "zoom" lens has to be focused for distance as well as being adjusted for focal length.

#### Exposure Determination

Since usually the shutter speed is fixed by the transport speed (sixteen frames per second) the exposure time is of the order of 1/30 sec. Adjustment for lighting and subject brightness is effected by opening or closing the iris diaphragm. To make things easy there is often a dial-type calculator, which indicates the stop to be used under different weather conditions. If an independent exposure meter is used the aperture indicated for 1/30 sec. is the one to follow. Most meters have a scale for cine exposures.

Since exposure is controlled by the stop, it is relatively easy to devise photo-electric systems that will adjust the diaphragm

according to the prevailing light. Intermediate between that fully automatic system and the manually operated, is the semi-automatic arrangement that requires a marker connected with the iris ring to be registered with the meter needle, both usually being visible in the view-finder so that adjustments may be made while shooting. Of course a preliminary adjustment must be made to the film speed selector, but if only one type of film is used—and that is advisable in colour to avoid differences in colour balance between successive shots on a properly edited film—the adjustment need be made only once.

#### Film Transport

For many years the power for driving the film through the camera and operating the shutter has been derived from a spring motor (some early 9.5-mm. cameras were actually hand turned). Several makes of 8-mm. movie camera are now available which are driven by electric motors fed from small dry batteries. They obviate the risk of the motor running down or cutting out at a crucial moment in a shot, but may encourage the novice to hold a shot too long.

The simpler spring motors lose speed as the spring tension begins to fail and, unless they are kept fully wound, there may be occasions when over-exposure occurs (pale film), owing to slowing down of the film transport. Better motors "cut out" before losing speed.

As has been mentioned, the usual transport speed is sixteen frames per second, but some cameras have provision for other speeds, for example, 8, 24 (the speed used for sound films), 32 and 48 f.p.s. The slower speed results in speeded-up movement on the screen. Speeds higher than 16 f.p.s. produce a slow motion effect. If speeds other than the normal are used, the aperture must be altered to compensate — closed one stop for 8 f.p.s. and for higher speeds opened, one stop for 32 f.p.s., one-and-a-half for 48 f.p.s.



**BELL & HOWELL SUNDIAL**  
Fixed-focus 10-mm. f/1.9 lens; dial-type exposure indicator; single-speed, single-frame and continuous-run release; £16 14s. 11d. *Rank*.

**CROWN 8ET**  
Revolving turret carrying 13-mm. f/1.8 lens plus 6.5 mm. wide-angle and 25-mm. long-focus converters;

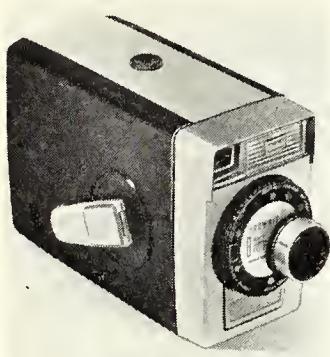


built-in filters; four transport speeds and single-frame; semi-automatic exposure control; pistol grip with trigger; £32 14s. 5d. *Copycat*.

**EUMIG S2**  
Fixed-focus 12.5-mm. Eumigon f/1.8; fully automatic exposure control; electric motor drive (four

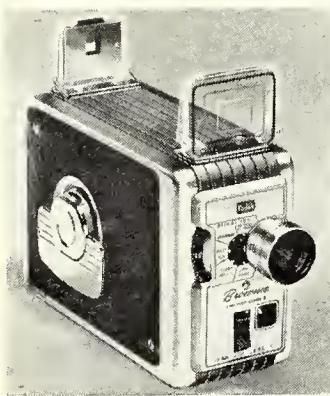


penlight cells); provision for remote control and connection to tape recorder to enable sound to be recorded while shooting; £27 18s. *Johnsons*.



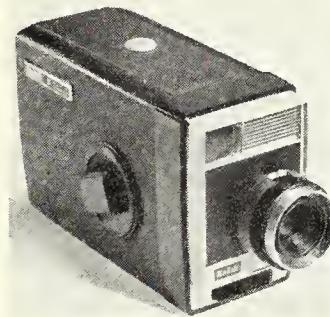
BROWNIE MOVIE 8 f/2.7  
Fixed-focus 13-mm. Ektanar f/2.7; stop set to indicate weather conditions; single speed; £10 19s. 11d. *Kodak*.

BROWNIE MOVIE MODEL 2  
Fixed-focus 13-mm. Cine-Ektanar f/1.9; exposure guide on lens panel;



single-speed transport with provision for continuous-run; folding open view-finder, £15. *Kodak*.

KODAK 8 MOVIE CAMERA f/1.9  
Fixed-focus 13-mm. Ektanar f/1.9;



built-in exposure guide; parallax warning in view-finder; self-zeroing footage indicator; £13 10s. 3d. *Kodak*.

KODAK AUTOMATIC 8  
Fixed-focus 13-mm. Ektanar f/1.9; fully automatic exposure control;



single-speed transport; built-in conversion filter with signal in finder; £26 14s. 9d. *Kodak*.

Another provision often made on all but the simplest cameras is the "single-frame" trip. It is used for titling and trick effects. Often there is also provision for "continuous run," which enables the cameraman to set the camera running and enter the scene.

#### View-finders

Except for the Brownie Model 2, and the Nikkorex 8, on which the finder consists of hinged front screen and rear sight plate, view-finders are of the enclosed optical type. Where there is provision for interchangeability of lenses or the fitting of wide-angle or tele converters, the front lens is engraved with lines indicating the respective fields of short, normal and long-focus lenses. There are usually marks to indicate the upper limit of the view when close-up shots are made, to compensate for parallax.

Where "zoom" lenses are fitted care should be taken to differentiate between those in which merely the field of view is adjusted to match that of the lens setting and those in which the actual view through the gate is transmitted to the eyepiece via a reflex system. It should not be forgotten, when using a "zooming" finder that, although the view always appears sharp in the finder, the taking lens may require to be focused. True reflex viewing and focusing is found only on the more expensive models.

#### Footage Meters

Two main types of footage are to be seen. Some consist of a circular dial showing how much film has been used. Others have straight scales along which a cursor travels. The latter type often indicate whether the reel is empty and when the "leader" (the outer coils of film that protect the bulk from light) has been run off. In addition, some mechanisms give an audible signal at intervals to assist in the timing of shots. More elaborate cameras have frame counters, which are invaluable in trick work.

A current vogue is to mount cameras on pistol grips incorporating linkage between a trigger and the camera release button. They may be fixed or detachable, the latter being preferable if it is intended to mount the camera on a tripod.

One high-priced Japanese camera has a body that can be rotated on its horizontal axis so that the second side of a film can be run off without opening the camera and reversing the reels.

Two Eumig models, including one that comes well below the price ceiling set for this survey, have provision for connection to a tape recorder, so that sound may be recorded simultaneously with picture shooting.

Manufacturers are vying with each other to incorporate selling points, and the steady stream of new models or versions of existing models is likely to swell after Photokina. It is hoped that the preceding notes of some of the points to look for will help the salesman new to cine to explain the differences between similar looking cameras to prospective customers.

#### After the Camera Sale

The sale of an 8-mm. camera is only the beginning of what can prove a worth-while run of business. Apart from regular purchases of film, a projector will be required plus, perhaps, a screen, a splicer, an "editor," bar lights and other sundries.

Until recently few, if any, laboratories were interested in duplicating 8-mm. colour film. Recently Kodak, Ltd., have inaugurated an 8-mm. "duping" service — for Kodachrome and Kodachrome II only. For up to 200 ft. the price is 47s. 6d. per 50 ft. (one reel), for over 200 ft., 45s. per 50 ft. Lower prices are charged for extra copies ordered at the same time. It is up to the dealer to let the service be known and to clinch the deal by reminding customers that "dups" should be made before a film has been projected too many times, otherwise scratches are liable to be recorded on the duplicate.

**KODAK ELECTRIC 8 AUTOMAT**  
Fixed-focus 13-mm. Ektanar f/1.6 (maximum effective aperture, f/1.9); fully automatic exposure control with adjustment permitting  $\frac{1}{2}$ -stop over- or under-exposure; aperture-value and low-light warning visible in finder; in-built type A to daylight conversion filter automatically comes into play on setting appropriate film speed; electric motor drive, four penlight cells with battery-state indicator visible in finder; 16 fps, continuous-run, single-frame and safety lock; new Dux cassette loading affording convenience of magazine and economy of reel loading, £43 9s.; spare Dux cassettes £2 14s. 3d. each. Delivery expected March/April. *Kodak*.

#### LUMICON AUTO EYE

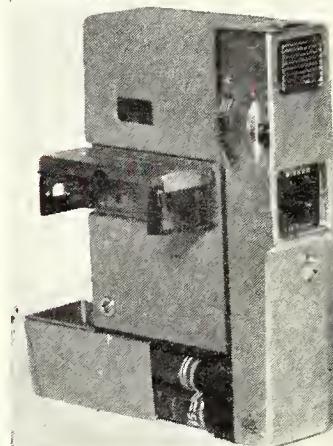
Fixed-focus f/1.9 "zoom" lens; automatic exposure control with manual over-ride; "zoom" finder



coupled with lens setting; single-speed and single-frame transport; provision for pistol grip with trigger release link; £36 17s. 7d. Pistol grip, £2 7s. 5d. *AICO*.

#### NIKKOREX 8

Fixed-focus 10-mm. Cine-Nikkor f/1.8; fully automatic exposure control, by CdS cell system;



manual over-ride; electric motor drive (penlight cells) folding Galilean type finder; slim and compact, designed for slipping into lady's handbag; £34 9s. 6d. *Pullin*.

#### PAILLARD-BOLEX B8SL

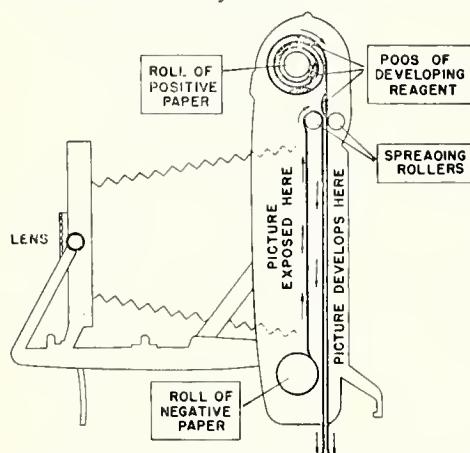
Twin turret for 13-mm. fixed-focus Yvar f/1.9 and 36-mm. Yvar f/2.8 lenses in focusing mount; photocell behind lens in semi-automatic exposure-control system; single-speed transport (18 fps), continuous-run and single-frame release; audible signal indicates end of film; with 13-mm. lens only, £32 13s. 4d.; with both, £47 13s. 3d. *Cinex*.

# COLOUR PRINTS IN FIFTY SECONDS

## — A *fantastic technical achievement*

A WIDE range of statistics can be produced to illuminate the development of the new Polaroid Land system of colour photography, but none more telling or revealing than the simple non-mathematical statement "from exposure to full colour print in fifty seconds."

Dozens of new inventions, many new molecules and hundreds of new laboratory techniques are embodied in the new "film," which is called Polacolor and is being released some time after the middle of the year.



The "mechanics" of the Polaroid system are evident from the above illustration. The exposed negative film and positive paper are brought together when the tab is pulled. At the same time the pod is ruptured and the developing reagent for the black and white photographs, or alkaline solution in the colour system, is spread by the rollers between the negative and positive surfaces.

The original requirements set out for the new system of colour photography demanded the production of a fully processed print inside the camera, not in a separate darkroom. That meant finding a one-step process to replace the twenty or more steps of the conventional colour process of producing a colour negative and making a print from it.

### Criteria

It was also necessary for the print to become available for inspection at once—a phenomenal reduction in processing time! The system had to work in the existing Polaroid Land cameras, which made it necessary to elaborate the use of the diffusion-transfer technology. Another stipulation to the research workers was to create a process that would be automatic and not require any technical assistance from the photographer. The final print was to be bright and luminous, and not to require coating or washing. The dyes had to be stable.

There was the additional complication of finding a process that did not require precise time-and-temperature control. What that involved was finding a different approach from the coupler method—as used in the conventional colour film—of creating dyes after exposure and during processing. In addition, the process had to lend itself to known film-manufacturing technology.

A new approach was also needed in respect of the positive print produced, which had to permit the developer reagent to remain alkaline long enough to develop the negative and form the positive image. It then had to reduce the surface of the print to a neutral or acid state so that oxidation from the air would not "muddy" the image when it was lifted from the camera.

Fifteen years' research have been needed to achieve the practical and commercial system now being marketed in a number of territories. Even within the past few months—since the film was first demonstrated at a London Press conference—the development time for a print has been reduced from 120 to 50 seconds! It is therefore no exaggeration to claim that the new Polaroid Land system is probably the most outstanding advance in modern photographic technology.

In conventional colour photography the dyes are not put into the film at the time of manufacture, but are created after exposure and during processing by the coupler method. The Polaroid method is to put dyes in the film at the time it is manufactured, by having a dye linked to a developer in a single molecule. In the synthesised molecule the dye and developer are linked by an "inactive atomic thread" that does not permit the interchange of electronic changes between the dye and the developer molecules, but does give the developer group control over the movement of the dye. The dye parts of the linked molecules are of different colours. The developer part of the molecule is used as a mechanism for controlling the amount of dye remaining in the negative and the amount that reaches the print. That concept also greatly increased the number of dyes that might be considered to meet the requirements for correct colour, for stability in the negative, and for permanence in the finished print.

### The Film

The Polaroid colour film is a paper negative that may be said to comprise

nine layers (see, fig. 1). There is first the negative base, upon which is placed a layer of developer linked to a cyan (minus red) dye. Above that is a layer of red-sensitive silver halide. A "spacer" layer is then added, then more developer, this time linked to a magenta (minus green) dye. Green-sensitive silver halide follows, then another spacer layer, then a layer of developer linked to yellow (minus blue) dye. Finally there is a layer containing blue-sensitive silver halide. When the negative is exposed, white light affects the silver halide in the blue, green and magenta-sensitive layers. Blue light affects only the grains of silver in the blue-sensitive layer and the green in the green-sensitive layer. Similarly the red light affects the red-sensitive silver halide.



The "pods" are sachets, one for each picture, containing the jelly-like alkaline solution.

As previously stated, the Polaroid colour system employs the Polaroid camera, as used for black-and-white films, and the camera is loaded with negative and positive materials. Attached to, and crossing, the positive paper are tiny metal foil pouches or sachets called "pods," one for each picture, and each pod containing a small amount of jelly-like alkaline solution. After exposure, the tab on the camera is pulled, bringing with it through a pair of rollers the negative and positive papers, together with a pod. The action bursts the pod, releasing the viscous alkaline solution in a thin, even layer between the negative

and positive papers. Within seconds the solution diffuses through all the layers of the negative. As the solution reaches linked molecules of a developer and dye, it sets the molecules moving in all directions (see fig. 2). A moving molecule is likely to reach its own emulsion layer first, because that layer is closest. If the moving linked molecule comes close to an exposed grain, it becomes involved in the development of that grain and becomes trapped in that layer as in A in the diagram. That is because, during the development of the grain, the developer portion of the linked molecule loses most of its mobility, and by its atomic leash to the dye holds the dye at that point. If the moving linked molecule hits an unexposed grain it keeps moving. If it escapes from its own emulsion layer it can keep moving until it hits the positive, even though it may encounter exposed silver halide in other emulsions. That is because, by the time it reaches the exposed grains, they have been developed by molecules originally close to the exposed grains (see B in diagram). It is the escaping linked molecules that form an image on the positive. A ray of green light exposes a silver halide grain in that layer, and the exposed grain traps the linked molecules of developer and magenta dye, while permitting linked molecules from the cyan and yellow dyes of the negatives to reach the positive. Together the two dyes form a green image (see C in the diagram).

Other colours are formed in the same manner, depending on which dyes reach the positive (again as shown in diagram).

#### The Positive

The positive consists of three principal layers (see fig. 3): the receiving layer for dyes, a spacer layer, then a receiving layer for alkali and the positive base. The receiving layer for the alkali consists of large acid molecules that are immobile even after the alkali reaches them. The spacer layer keeps the acid molecules from coming into contact with the receiving layer for the dyes, and in addition slows down the rate at which the alkali reaches the acid molecules. The receiving layer for the dyes accepts and holds the linked molecules that escape the negative, and the mordant layer holds the dyes much as cloth holds dye during dyeing. The positive must permit the reagent to remain alkaline long enough to develop the negative and form the positive image, yet must reduce it to a near neutral or acid state by the time the picture is lifted from the camera. Thus, during most of the 50-second processing time, the dyes are moving into the image layer, and little alkali is getting through the spacer layer. The receiving layer for alkali is virtually inactive until the image is fully formed. At about that instant, however, the acid molecules

in that layer have combined with the small amount of alkali that has seeped through the spacer layer, and the resulting water that is generated opens the spacer layer and is circulated through the image layer to help remove the remaining sodium ions or alkali. With those ions removed, the molecules around the dyes of the image can get closer together and form a tough bond



Removing the print from the back of the camera.

that embeds the dyes in a clear, brilliant and neutral layer permitting unusually luminous colours. The print comes out of the camera "damp dried" ready to be enjoyed, but the surface should not be touched for a few moments until it has dried normally.

#### Film Characteristics

The speed of Polacolour varies with the temperature of the camera. At 60° F. the speed is 75 ASA. As temperature drops so does the film speed, which becomes 25 ASA at 45° F. and at the other end of the scale reaches 100 ASA at 75° F. As mentioned, development time is 50 seconds at 60° to 70° F. At low temperature, however, the processing should be extended to be about 90 seconds at 45° F. At the other end of the scale it can take about 40 seconds when the temperature is in the region of 75° to 100° F. The film is balanced for noon sunlight colour temperature at 6250°K, and, for flash, blue bulbs or blue shield over white flash-bulbs should be used. No filter is required for electronic flash.

Messrs. Polaroid state that the efficient working range of the film is from 1/10 to 1/1,000 sec. exposure. If the exposure is above 1/10 sec., both speed loss and increased yellow densities are experienced, and blue filters are recommended in each case.

#### Camera Conversions

All Polaroid Land cameras, except models 80, 80a and 80b, can use Polaroid Polacolor film without factory conversion. Such conversions will become available during mid-1963, and plans and costs will be announced when the film is put on the market in the United Kingdom. The company have announced their intention of initiating a rapid copying and enlarging service, such as is offered in the United States.

It is intended that orders shall be carried by jet airliner between Europe and the United States, for processing there.

As in most modern research, the development of the process is the work of many scientists, technicians and engineers. Dr. E. Land and Dr. Howard G. Rogers were the key people in the project. Rogers was the principal inventor of the total structure of the negative and the concept of the colour-forming mechanism, which is built around the molecule linking a developer and dye. He described the type of molecule that was necessary. Dr. Land developed the structure of the positive and the technique that eliminates the after-coating of the picture yet leaves the dyes embedded in a brilliant clean hard layer of plastic. Dr. Elkan R. Blout headed a group of chemists who created the new compound in accordance with Rogers' ideas, and over 200 patent applications stem from their efforts. William J. McCune, jun., has been responsible for the development and engineering facilities for the manufacture of the negative, and for the apparatus that makes the positive sheets and pods. Dr. Milton Green (assistant manager of organic chemical research) worked primarily on the synthesis of the linked developer and dye molecules in all three categories (yellow, magenta and cyan). Other important work was done by Drs. H. C. Haas, Miron S. Simon, George R. Bird and Richard S. Corley, and by Professors Robert B. Woodward and Saul G. Cohen.

#### A Joint Programme

After the approach of using linked developer and dye molecules had become fairly well established, and techniques for making the new molecules had been found, and the Polaroid organisation had made full colour pictures from multi-layer negatives, the company approached Eastman Kodak Co., and a joint programme was drawn up with the objective of having Messrs. Kodak manufacture the colour negative for Polaroid, Polaroid itself manufacturing all of the positive sheet and processing pods. Steps were taken to adapt Polaroid's multi-layer negative to Kodak's established manufacturing methods and facilities. In a parallel programme Polaroid have been developing their own techniques and facilities for the manufacture of the negative. They plan to manufacture a portion of their negative requirements in their own plant.

The concept of creating a new molecule that combines the dye, or a developer that carries the dye, initiated research work that led to the production of 5,000 new compounds, and the processing of more than 300,000 experimental prints, but few of those who are to "pull the tab" to obtain a sparkling colour print are likely to be aware of the immense technical achievement that it represents.



# THE VILLAGE THAT NEVER SLEEPS

## *Film manufacture on the Italian Riviera*

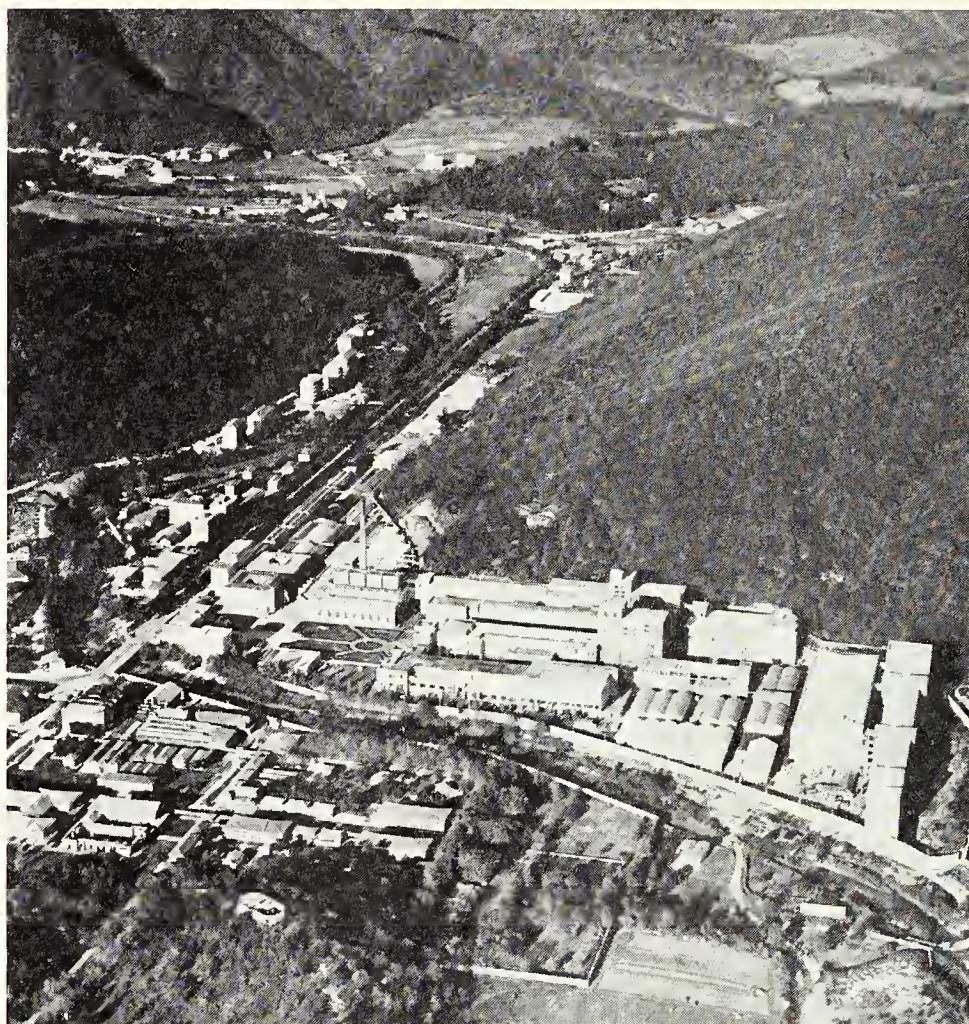
redients of the base material are blended in vats, processed through homogenisers, and passed through a succession of filters. The resulting hot

liquid blend is pumped to rolling machines, which spin it out into thin sheet for baling. The machines, each about 50 ft. long, operate automati-

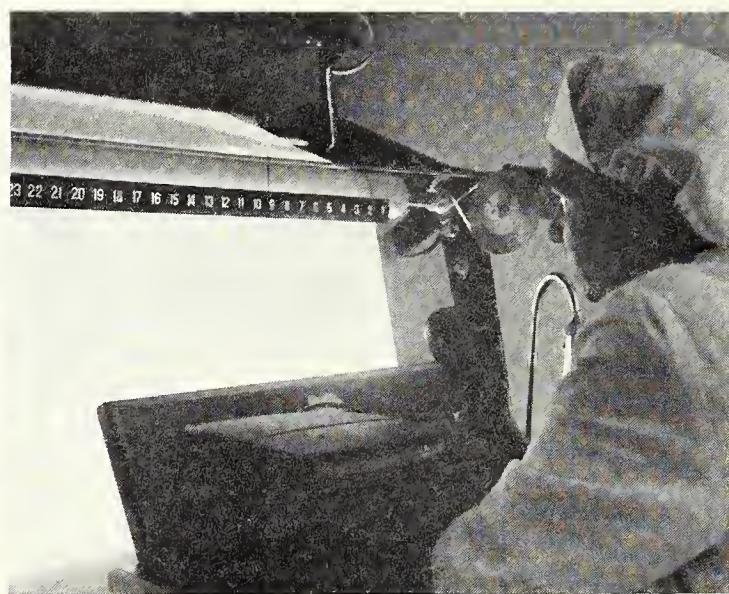
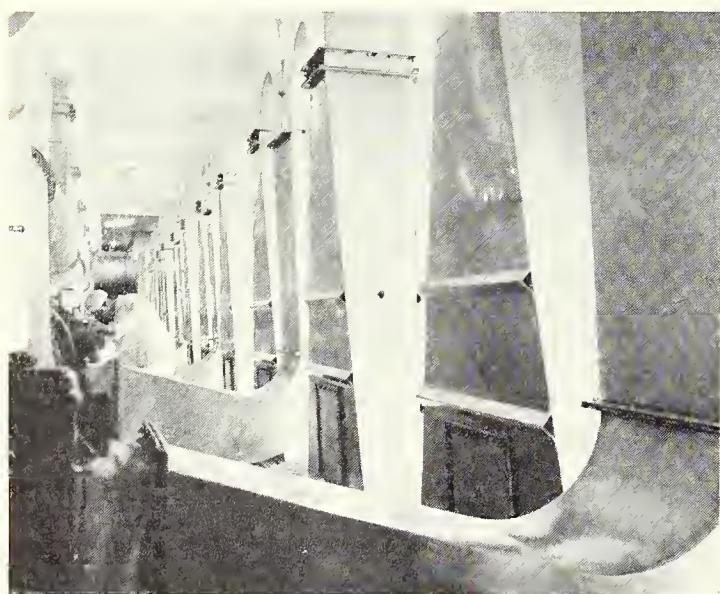
**F**IIFTY years ago Ferrania was a little village set in the Ligurian hills, a fifteen-mile climb from the port of Savona on the Italian Riviera. Today it is an empire of its own, in the form of an extensive modern factory that has made the name of what was a tiny village world-famous in the photographic trade and motion-picture industry. For today are manufactured at the factory about 1,000,000 miles of film annually.

Most important material in the production of any photographic film is, of course, the transparent sheet base that carries the emulsion. That is the same whether used for negative, panchromatic, x-ray or high-speed sheet materials. Messrs. Ferrania claim fourth place in the world's chain of film base makers, and the factory is one of the most modern of its kind in Europe. The material it manufactures is supplied to many other Continental film producers. In Belgium, for example, the company's share of the total market is understood to be 75 per cent. Demand is so great that the manufacturing department works non-stop twenty-four hours a day on all but ten days of every three years when, for maintenance purposes, it is dormant. Nearly all the factory's equipment was designed and produced at the Ferrania engineering works. It is constructed of stainless steel.

In the first stage of manufacture in-



The Ferrania factory, Ferrania, Savona, seen from the air.



Left, a side view of the factory's air filtration plant. Right, a stage in the control of ciné film. A supervisor's observations, recorded on magnetic tape, synchronise with the spreading roller of the film.

cally. They remove unwanted solvents from the liquid before spinning, extract dust (which would attract static electricity) from the completed bales, and apply an adherent solution to both sides of the prepared sheet so that it readily accepts the emulsion coating.

The building in which the sensitised coatings are added to the transparent base, and in which the final inspection and packing take place, is noteworthy. The molten emulsion, creeping along a large shallow bath, makes a fascinating sight, though one it is not always possible to see, for some emulsions—for example panchromatic—require all the work to be carried out in total darkness. At the Ferrania factory five departments work in darkness for twenty-four hours a day—in three shifts. To the visitor it is decidedly strange to be taken into a building with no windows and only the faintest glimmer of a green light in the corridors and lifts, and finally to be guided into a totally dark void in which, unseen, many women are busy packing and sealing films. In the departments involved with virgin film strict control of atmospheric

temperature and humidity has to be maintained. Besides being warm and dry, the air has to be clean, and that demands an immense air-purifying plant—no less than  $\frac{1}{4}$  mile long and believed the largest in the world. Even that plant would be unable to counteract the effect on film of a radioactive cloud, and meteorological stations throughout Italy have been given authority to warn the Ferrania factory direct should any such aerial static charge be in the vicinity. If that happens there is no alternative but to stop production until the danger has passed.

Supplementing the air-purifying plant is a power-house serving not only the factory but also the houses, shops, street lights and indeed all other power purposes of the village of Ferrania. The furnaces provide 50 tons per hour of steam heating, and a refrigerator unit works constantly in warm weather to maintain the correct temperature for film production and storage. In total the Ferrania power-house provides enough heat and power for a town of 50,000 inhabitants.

Throughout all manufacturing pro-

cesses materials are under rigid control, checks of every possible variable being made every few minutes of the day and night. Even more stringent are the tests on x-ray films, so that every consignment of any kind of film leaving the factory may be given a guarantee of being in perfect condition.

All workers involved in handling the sensitised materials are required to take a bath each day, and to consult the company's doctor before using such products as sun-tan lotions. (On one occasion it was found that a worker had contaminated large quantities of film through using an application containing a small quantity of mercury.) Most of the 4,000 employees of the company are well satisfied with the conditions in their village, which is complete with its own cinema, café, shops and other amenities. Nearly every worker has a car, and flats with garage, are available from the company for one-sixth of the cost elsewhere.

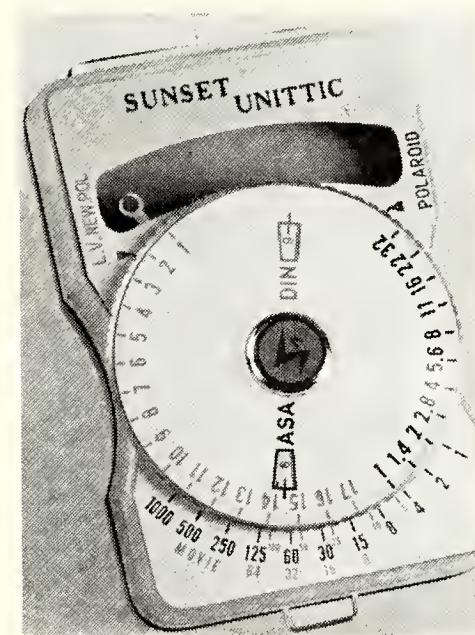
Production continues to rise, and the barometer is set at "fair" for further progress in the manufacture of the films, film base, cameras and projectors.

## PHOTOGRAPHIC NOTES

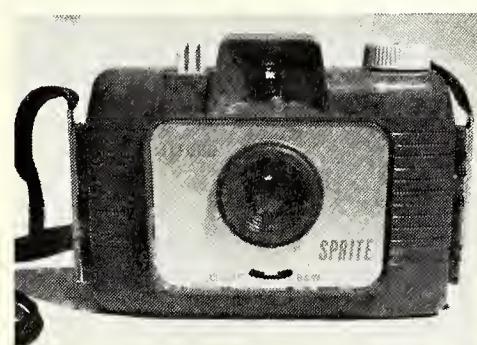
**New Low-priced Camera.**—The 127 Sprite camera, of Ilford, Ltd., Ilford, Essex, produces twelve  $1\frac{1}{8}$ -in. sq. pic-

marketed by Pullin Optical Co., Ltd., Ellis House, Aintree Road, Perivale, Middlesex, is the semi-automatic Pen D, an outstanding feature of which is the lens—a coated six-element F Zuiko f/1.9 with built-in coupled exposure meter. The camera has seven shutter speeds ranging from  $\frac{1}{8}$  to 1/500 sec., and X-synchronisation. Focusing is from  $2\frac{1}{2}$  ft. to infinity. A lined leather case and wrist strap are available.

**Japanese Light Meter.**—David Williams (Ciné Equipment), Ltd., 5 Glasshouse Yard, London, E.C.1, recently introduced on to the British market the

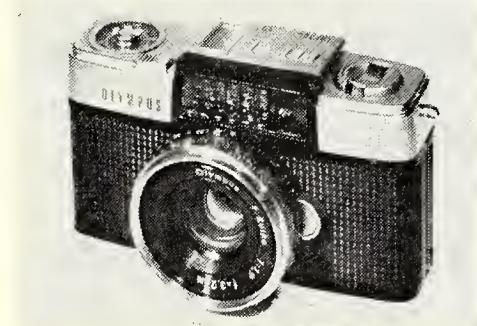


Japanese Sunset Unittic 31 exposure meter, designed so that all scales may be manipulated with one hand. It has an A.S.A. index from 9—12,000; DIN from 9—42, shutter speed range from 1-1,000 sec., and aperture-scale from



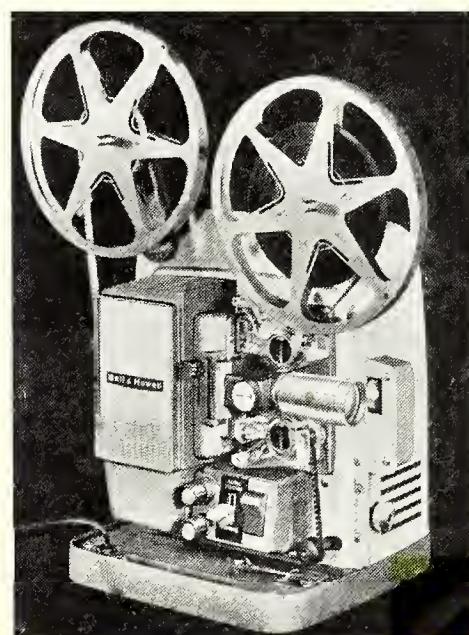
tures in colour or black and white, and is styled in strong grey plastic, with silver face plate imprinted in red. The lens is focused to take sharp pictures from 4 ft. to infinity and has two aperture settings—one for colour and the other for black and white. An optical eye-level view-finder is housed in the body moulding and the camera is provided with a black-fabric carrying strap attached to metal side catches.

**Semi-automatic and "Half-frame."**—Latest addition to the Olympus Pen range of half-frame 35-mm. cameras



f/1 to f/32. There are also a light-value scale with index from 1 to 17, and a ciné scale with 8, 16, 32 and 64 frames per sec. On the reverse side is a self-setting zero adjustment. The Sunset Unittic 31 is supplied complete with an incident light attachment, case and lanyard.

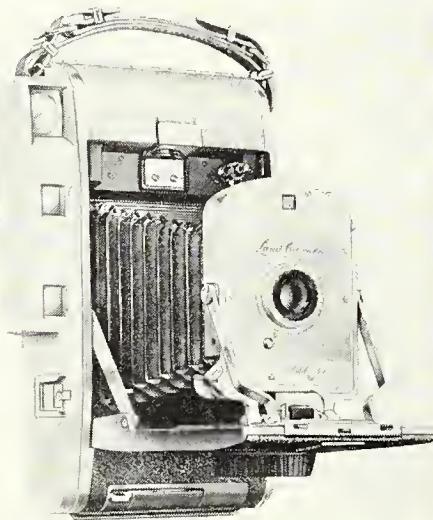
**Self-threading 8-mm. Projectors.**—Two automatic 8-mm. self-threading projectors—the Autoload I (model 256), and Autoload II (model 266) have been introduced by Rank Organisation, ciné and photographic division, 19 Mortimer Street, London, W.1. Both are fitted with Filmovara zoom projection lenses, and have automatic self-threading. They are fully portable, with strong, self-contained metal carrying cases. Voltage adjustment is simple; the control is located under the lamphouse. Both



Autoload II self-threading projector.

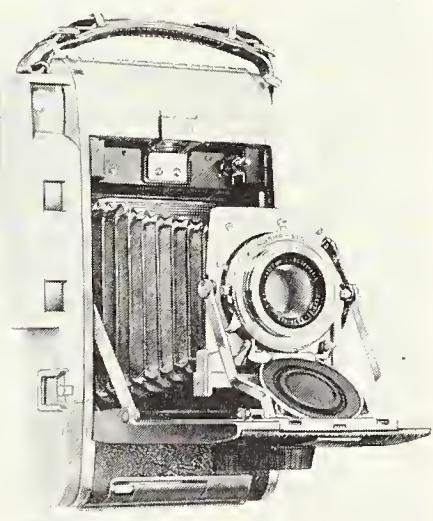
Autoload projectors are claimed to give "exceptional light output"—the Autoload II by means of a new 21.5-volt 150-watt Diachroic lamp. Other Autoload II features include normal and slow-motion projection, variable-speed control framer, fine-focus lens control, f/1.6 17-mm.-27-mm. Filmovara lens, operating switch with forward, still and reverse positions, self-lubricating mechanism, high-speed rewind, and 400-ft. film capacity. Autoload I features include frame adjustment control, three-position operating switch, 15-mm. to 20-mm. Filmovara lens, 21.5-volt, 150-watt Tru-flector lamp, high speed rewind, 400-ft. film capacity, self-lubricating mechanism and tilt control. Finish of the Autoclad II is in two-tone fawn crackle and of the Autoload I in charcoal and silver.

**New Agreements, Cameras and Prices.**—Polaroid (U.K.), Ltd., Queensway House, Queensway, Hatfield, Herts, announce two new cameras and new dealer agreements. The two cameras, models 160 and 120, are similar to



Polaroid model 160 camera.

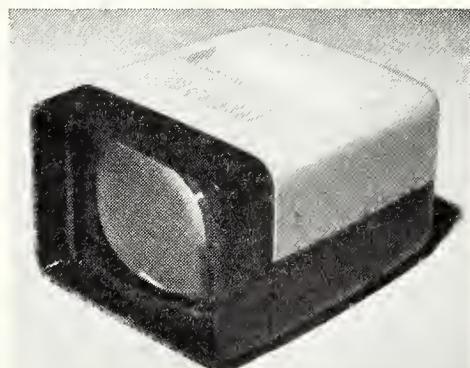
the models 800 and 110B which they supersede. To give dealers an opportunity of selling present stocks, the new cameras are not being announced to the public until May. The model 120 is said to be the most versatile Polaroid



Polaroid model 120 camera.

Land camera ever made. It has an f/4.7 lens and a Seikosha Special SLV shutter adjustable from 1 to 1/500 sec. The shutter is synchronised for both regular and electronic flash. There are a super-imposed image-type range-finder and a parallax-corrected view-finder. The exposure may be arranged by adjusting the aperture and speed controls separately, or by means of a built-in interlock using the camera's exposure value system. Retail prices of the two cameras are considerably less than those of the models they supersede. With the announcement of the new models the company has also introduced two new dealer agreements, one covering films only and the other the whole range of Polaroid apparatus. Concurrently retailer discounts have been increased.

**Transparency Viewer.**—The new transparency viewer from Ilford, Ltd., Ilford, Essex, is a battery operated, hand-held viewer for 2 x 2 in. slides. A rectangular plano-convex lens is fitted that gives a magnification of approximately 1½ x linear. The viewer accepts card, glass or plastics-frame mounted slides and can be used for all trans-



parencies up to "super slide" size. The slide holder has an aperture 39 x 39 mm., which being square allows the viewer to be held in the same position whether vertical or horizontal format slides are being viewed. The neatly styled, two-tone body consists of hard-wearing plastics mouldings. A white plastics reflector surrounds the 2.5-volt, 0.2-amp. frosted-glass bulb and incorporates an opalescent diffusing panel giving even light distribution. The viewer operates on two 1½-volt U11 batteries. The reflector and the slide holder can both be removed for clean-

ing and the inside surface of the lens is easily accessible. The bulb remains alight automatically as long as the slide is depressed.

**"Instant Slow Motion."**—A new automatic Bell & Howell 8-mm. "zoom" lens camera, featuring instant slow motion, is announced by the Rank Organisation, photographic division, 19 Mortimer Street, London, W.1. The



Zoomaster (model 8123) has an f/1.8 fixed-focus "zoom" lens with a range of 9 mm. to 27 mm., and coupled view-finder. On the lens there is a finger-tip lever for "zoom" operation. A photo-cell sets exposure accurately, and has provision for manual over-ride. The Zoomaster has a negator-type spring giving a film run of 15 ft. from one full wind. A special clutch prevents any overwinding. An automatic film footage indicator is calibrated in ft. and metres, and there is a reserve power indicator. The camera door is of hinge type to assist film loading. An exclusive starting button enables the user to film at normal speed of 16 frames per second or at 48 f.p.s. (with



**TWIN-PACKS:** Hanimex (U.K.), Ltd., 42 Lower Marsh, London, S.E.1, claim rapidly increasing sales of Perutz black and white roll film through the use of "twin-packs"—two films in a specially designed pack, displayed in a scatter-type merchandiser. A "replacement guarantee" is printed on the back.



Kodak electric 8 automatic camera (see p. 337).

the electric eye in continuous operation) or at one frame at a time. A "lock" lever gives continuous operation, enabling the user to enter any film being taken. The film speed dial automatically adjusts for all film speeds from A.S.A. 10-40.

**Colour Print Frames.**—Inexpensive, white, wooden frames for colour prints are available in two sizes ( $3\frac{1}{2}$  x  $3\frac{1}{2}$  in. and  $3\frac{1}{2}$  x 5 in.) from C. H. Halliday & Co., Ltd., Holbeck Lane, Leeds, 11. Messrs. Halliday also offer "perhaps the widest range of standard designs of D. and P. wallets in the world."

**Duplicates from Superslides.**—Kodak, Ltd., Kingsway, London, W.C.2, announce that Kodachrome duplicate transparencies can now be made from superslide transparencies (size  $1\frac{1}{8}$  x  $1\frac{1}{8}$  in.). The superslides, reduced to 31 x 31 mm., are supplied mounted in 2 x 2-in. card ready-mounts for projection.

**"Zoom" Gun.**—David Williams (Cine Equipment), Ltd., 5 Glasshouse Yard, London, E.C.1, are marketing the Sunset "zoom" gun, powered by a 650-watt sealed-beam 240-volt lamp with throw up to 20 ft., on/off switch at back of body controls, wide-angle and standard lens lighting, and telephoto and spotlight effects. The lamp is fitted into a well ventilated mount that can be tilted back 45° for "bounce light."

**Professional Clip-type Hangers.**—A new range of stainless steel clip-type hangers is available, in five sizes, from Ilford, Ltd., Ilford, Essex. Carefully designed to ensure ease of handling in total darkness, it overcomes the difficulty of finding the spring clip by designing the thumb plate "in generous proportions." The rounded edges prevent any discomfort when pressure is applied and the suspension hook slides easily on and off the drying rail.

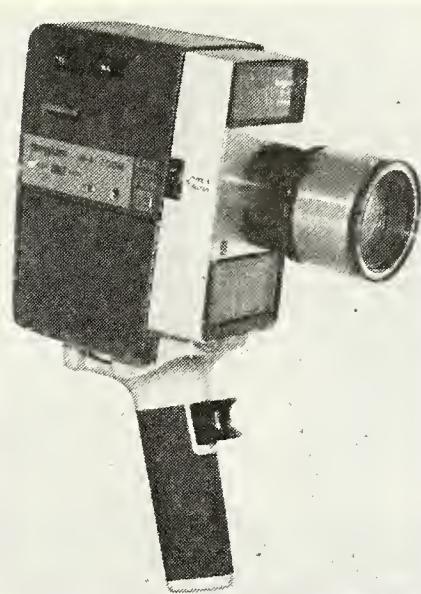
**New, Compact Flash Gun.**—Latest accessory in the Olympus Pen photographic goods range of Pullin Optical Co., Ltd., Aintree Road, Perivale, Middlesex, is a flash gun designed to fit the Pen cameras and any other camera with a shoe. The new flash gun takes AG1 flash bulbs and operates from one B54 15-volt Ever-Ready type battery. The bulb is inserted and released by means of a press button. The gun comes in a neat plastic case.

**Transistorised Flashgun.**—The Stitz 30, distributed by R. F. Hunter, Ltd., 51 Gray's Inn Road, London, W.C.1, is a compact, light-weight, self-contained unit finished in two-tone grey. With its transistor circuit and xenon discharge tube powered by four U7 1.5-volt dry batteries, the Stitz 30 produces a powerful flash (duration 1/1,000 sec.). At least sixty flashes per set of batteries are claimed and an efficient reflector ensures that light output is at its maximum effect.

**Universal Flash-gun.**—The Hanimex universal flash-gun is claimed by Hanimex (U.K.), Ltd., 42 Lower Marsh, London, S.E.1, to be the first that can be used with AG-1 and PF-1 bulbs without the need for an adapter. The socket base can be rotated to suit the type of bulb being used. (If the correct

position is not set, it is impossible to insert the flash bulb.) In addition, the gun has a built-in test bulb, ejector button and spring-loaded shoe clip for attaching to a standard camera accessory shoe.

**Power "Zooming".**—The Argus M4 ciné camera of Hanimex (U.K.), Ltd., 42 Lower Marsh, London, S.E.1, is fully automatic. The film drive and "zooming" action are both operated



by four penlight batteries, and the fixed-focus f/1.9 lens "zooms" from 9 to 27 mm. Collimation tests indicate that it holds its focus to a high standard throughout that range, which means that the power "zooming" action may be fully exploited during continuous filming. The camera has an automatic footage counter with automatic reset; sockets for cable and remote control releases (the manual release incorporates a safety lock) and there is a special battery cassette that facilitates correct loading and removal.

**All-purpose Screen.**—The Forum—latest addition to the screen range of R. F. Hunter, Ltd., 51 Gray's Inn Road, London, W.C.1—provides an inexpensive, portable and compact "all-purpose" screen. It is simply erected (by swivelling the folding feet, elevating a fold-away arm, and hooking the unrolled screen to it). A stand is available, as an accessory, for converting the Forum to a tripod screen. Four screen sizes are available, in two surfaces (crystal glass beaded and "Blankana" white).

**Colour Print Kit.**—The Paterson colour print kit recently announced by R. F. Hunter, Ltd., 51 Gray's Inn Road, London, W.C.1, is claimed easily mastered by any amateur in one evening. Prints are made by a two-solution process similar to that for black-and-white photography, and any colour negative film may be used. No special equipment is needed, other than standard enlarging apparatus, and the stock solutions (which keep for several months) allow wide latitude at a temperature range from 65° to 85° F. Various sizes of paper are available and a full range of replacements for parts. The kit contains ten sheets of half-

plate Pavele colour paper, 1,000 mils of developer, 600 mils of bleach fixer, a basic filter and holder, a set of printing filters, a safelight filter and an exposure calculator.

**Extended Services.**—Hamilton Tait, Ltd., Penicuik, Midlothian, announce that the building extension planned in 1962 is nearing completion and will be in operation for the 1963 season. With the new Kodak 5S printer, Pakopy internegative/duplicate printer and more continuous processing machines, Messrs. Tait can now offer a comprehensive service for negative-positive and reversal processing. The "enprint" range now covers the  $2\frac{1}{2}$  x  $3\frac{1}{2}$  in. "miniprint" to 7 x 10 in. large Enprint and is available for Kodak, Ilford, Gevaert, Agfa, Ferrania and Adox negative films.

**Compact Flash Light.**—The Hanimex speed light (model HS) is a compact, one-piece unit made from specially tested, high-impact grey plastic. Transistors, miniaturised components and penlight batteries give a lightweight unit economical to operate. The special circuit and components produce an intense flash (40 joules) suitable for colour and black and white film. This unit also has an open flash/test button on/off switch, neon indicator, 3-mm. coaxial plug and a shoe clip with locking flange. Manufacturers are Hanimex (U.K.), Ltd., 42 Lower Marsh, London, S.E.1.

**West German Flash Unit.**—The new Regula Variant S electronic flash unit combines compactness and light weight with the flash power to be expected from considerably larger units. Of "one-piece" design, the new unit measures only  $5\frac{1}{4}$  x  $1\frac{1}{8}$  in., and weighs 17 oz. Powered by a nickel-cadmium accumulator, which it is said needs no attention beyond charging, the Variant S has a battery-economy transistor circuit, which cuts off the power when the capacitor is fully charged, and then boosts it from time to time as the charge leaks away, so that the unit is always ready for firing, without wastage of the accumulator charge. A flash factor of 160 for 200 A.S.A. black and white film is achieved, with a recycling time of 6-8 seconds. Agents are Photopia, Ltd., Hempstalls Lane, Newcastle, Staffs.

**Reflex Camera Reintroduced.**—David Williams (Ciné Equipment), Ltd., 5 Glasshouse Yard, London, E.C.1, have reintroduced the Flexaret camera as the Flexaret VI Automat. The new model accepts both 120 and 35-mm. roll films, with counter mechanism adjustable for each. The f/3 viewing and f/3.5 80-mm. four-element Belar lenses are fitted with bayonet mounts for accessories. Focusing is designed to be operated with either hand. The Prontor SVS shutter has speeds up to 1/500 sec., XM-flash synchronisation, delayed action and a light value scale from three to eighteen. Other features are an eye-level magnifier for precise focusing, while for rapid movement or poor lighting there is an eye level view-finder for 120 and 35-mm. films. The die-cast body, fitted with standard accessory shoe, has chrome fittings and is covered with light grey leather.

**Protection for Camera Displays.**—E. Pollard & Co., Ltd., 159 St. John Street, London, E.C.1, suggest that cameras may be safely exposed in shop windows fitted with their folding Vizor grilles.

**Change of Address.**—As from March 25, sales and manufacture of Minidex film filing and Leica albums are being dealt with by James Blackwood & Co., Ltd., Warner House, 22 Bakers Row, London, E.C.1 (telephone: Terminus 8519).

**Slide Box.**—Recently introduced by Bradley & Bliss, Ltd., Kings Road, Reading, is the Sherbourn slide box designed to hold 100 2 x 2 in. transparencies. Each slide rack is numbered and an index card is held inside the lid by a metal clip. The box is made of wood with plastic inserts.

**Agfa Distributors.**—Evans Medical (Northern), Ltd., 21 Liddell Terrace, Gateshead, 8, co. Durham, announce that they have been appointed distributors for the products of Agfa, Ltd. Orders may be placed at all hours of the day and night by telephoning Gateshead 73961.

**Photographic "Best Sellers."**—"Five photographic best sellers" from Philips Electrical Ltd., lamp and lighting group, Century House, Shaftesbury Avenue, London, W.C.2, are the Photocrescenta enlarger lamps, high-efficiency Photolita and Phillips' reflector Photo-flood lamps, Photoflux flashbulbs and Phillips' projector lamps.

**Ciné and Slide Projectors.**—Luminos, Ltd., 1 Belsize Crescent, London, N.W.3, are sole United Kingdom distributors for Noris ciné and slide projectors, which they claim to be "the finest value on the market." The Noris Super 100 ciné projector has a 20-mm. Plankar lens, 12-volt/100-watt lamp and cable-release built-in "editor."

**Low-priced Binoculars.**—Highgate Optical Manufacturing Co., Ltd., 71 Great Portland Street, London, W.1, claim for their Regent binoculars that "nowhere is it possible to buy their equivalent at such a low price." Manufactured with Chance-Pilkington optical glass, the binoculars are nationally advertised.

**Projector Lamps.**—Kalimar projector lamps, which are claimed by Copycat (Photographic), Ltd., 40 Victoria Street, London, S.W.1, to be "established favourites in the U.S.A. and elsewhere," are available in Britain in most popular sizes. Precision made, they are "fully guaranteed," a lamp replacement service "in line with other manufacturers" being operated by Messrs. Copycat.

**Cameras, Chemicals and Projectors in Stock.**—Brook, Parker & Co., Ltd., Ashfield, Great Horton Road, Bradford, 7, are wholesalers of "everything photographic." They hold stocks of Agfa, Balda, Braun, Canon, Halina, Polo, Rollei, Voigtländer and Yashica cameras, projectors by Aldis, Braun, Eumig, Gnome, Halina and Specto, and photographic chemicals by Agfa, Ilford, Johnsons and May & Baker.

**Guaranteed Repairs.**—A comprehensive repair service for still and ciné cameras, projectors, binoculars, and exposure meters, is offered by Vanguard Instruments, 47 Half Acre, Brentford, Middlesex, who also recondition and coat lenses. All repairs carry a twelve-

month guarantee, and a forty-eight-hour express service is available when required. Messrs. Vanguard specialise in Leica, Rollei and Bell & Howell instruments.

**Through Pharmacies Only.**—Apparatus, materials and a full range of photographic accessories is available from H. B. Dorling, Ltd., photographic division, Selinas Lane, Dagenham, Essex, including Pressman dish warmers (thermally controlled), single and double-sided print dryers, lighting units, reflectors, tripods and studio lighting lenses. Messrs. Dorling accept orders only from retail pharmacies. A price list is available.

**New Radiant Screens.**—Pullin Optical Co., Ltd., Ellis House, Aintree Road, Greenford, Middlesex, announce the arrival of three new improved Radiant tripod screens. The De Luxe Meteor is fitted with the Toematic leg lock for easy setting up, and a Hyflect Plus glass-beaded surface claimed "whiter and brighter and, in addition, fungus-resistant." The VistaMaster comes in two sizes, with lenticulated white or silver surfaces. The silver surface permits projection in partly lit rooms, and wide-angle viewing. The white surface is stated to give wide angle viewing up to 180°. All the VistaMaster models are fitted with the automatic opening "magic tri-lock," and one stop tensioning bar.—A stout board floor "dispenser" that holds six Radiant screens is available with orders of any six of the new screens and provides a sturdy display aid.

**Five Projectors from Australia.**—Hanimex (U.K.), Ltd., 42 Lower Marsh, London, S.E.1, are distributing a range of Australian-made projectors of high light output and low temperature at the slide gate. Features of the Hanorama "150" and "300" include semi-aspheric condenser systems, adjustable reflectors, f/2.8 lens, press-button elevation and drop-in slide feed. Three recently marketed Hanimex-Argus Trufocus projectors are of traditional Argus styling but have a new condenser system, giving greater brilliance over a larger area. The Trufocus range may be fitted with 500-watt proximity lamps for further light output. They will also accept 300-watt Trufocus or proximity lamps. A four-inch f/2.8 lens is fitted. The standard model has a manual push-pull slide change and the Trufocus Hanomatic a semi-automatic changing device; the Hanomatic is built into its carrying case. The Super Hanomatic may be operated from the body or with a remote control lead.

**Compact Lighting Unit.**—The "Watistar-1000" lighting unit recently introduced by Photopia, Ltd., Hempstalls Lane, Newcastle, Staffs, uses the "most powerful iodine-quartz lamp yet produced," the 1,000-watt Philips PF-800R. The Watistar is a self-contained unit without any outsize auxiliaries. The lamp head, 6½ in. long x 3 in. high, with a maximum depth of 2½ in., is attached to the pistol-grip handle through a ball and socket joint, making it possible to employ indirect lighting. The handle (6½ in. long) carries a hinged camera bracket, with non-slip rubber facing and a standard ¼ in. Whitworth camera screw. Also incor-

porated in the handle are a thumb-operated on-off switch, and a cartridge fuse. Light distribution from the 5 x 2 in. metallic reflector is even, and the makers recommend an exposure of 1/30th sec. at f/8 on 80 A.S.A. film, with the lamp 10 ft. from the subject. Tests by Photopia, Ltd., indicate, however, that the distance could be "appreciably increased." The lamp life is fifteen hours. The unit is finished in grey and black, with matt chrome trim.

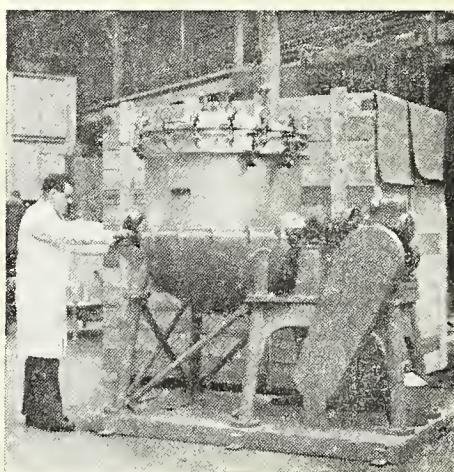
#### MANUFACTURERS OF CINE CAMERAS

FULL names and addresses of manufacturers named briefly on pp. 335-37 are:

**Agfa:** AGFA, LTD., 27 Regent Street, London, S.W.1. **AICO:** APPARATUS & INSTRUMENT CO., LTD., Aico House, 36 Grove Road, Hounslow, Middlesex. **Cinex:** CINEX, LTD., Bolex House, Burleigh Gardens, London, N.14. **Copycat:** COPYCAT (PHOTOGRAPHIC), LTD., 40 Victoria Street, London, S.W.1. **David Williams:** DAVID WILLIAMS (CINE EQUIPMENT), LTD., 5 Glasshouse Yard, London, E.C.1. **Johnsons:** JOHNSONS OF HENDON, LTD., 335 Hendon Way, London, N.W.4. **Kodak:** KODAK, LTD., Kodak House, Kingsway, London, W.C.2. **Neville Brown:** NEVILLE BROWN & CO., LTD., 93 New Cavendish Street, London, W.1. **Pullin:** PULLIN OPTICAL CO., LTD., Aintree Road, Perivale, Middlesex. **Rank:** RANK ORGANISATION (RANK PHOTOGRAPHIC), 19 Mortimer Street, London, W.1. **Silber:** J. J. SILBER, LTD., 11 Northburgh Street, London, E.C.1.

#### MANUFACTURERS' ACTIVITIES

**Surgical Fellowships.**—Smith & Nephew Associated Companies, Ltd., 2 Temple Street, Victoria Embankment, London, W.C.2, are offering six fellowships in surgery in 1964. As in the previous two years in which awards have been made, the £1,200 fellowships are going to outstanding doctors from the British Commonwealth and developing countries. They will be tenable for one year in the United Kingdom only and are open to holders of a medical qualification registrable in the United Kingdom who have had at least two years' general clinical experience since registration.



**FOR SOUTH AMERICAN TEETH:** Designed to mix 1,800 lb. of tooth-paste per batch and made by W. P. Butterfield (Engineers), Ltd., Shipley, Yorks, the jacketed pan illustrated is being crated for dispatch to South America.

# Camera Trends at 1963 Photokina

## NEW MODELS TO APPEAL TO WOMEN

After a lapse of two-and-a-half years Photokina, Cologne, Germany, opened its doors to the usual surging mass of visitors on March 16. Meanwhile, in the beautiful Rhine room, within the precincts of this 864,000 sq. ft. of exhibition space, the fair was formally declared open by the President of the West German Republic (Dr. H. C. Heinrich Lübeck), supported by the lord mayor of Cologne and leaders of the German photographic industry and the presidents of photographic organisations from all over the world. Great Britain was represented by Mr. H. S. Newcombe (president, Photographic Dealers' Association and a member of the international body Interphoto). The Royal Photographic Society was represented by its president (Mr. Victor Gallafent) and secretary, many past-presidents and council members.

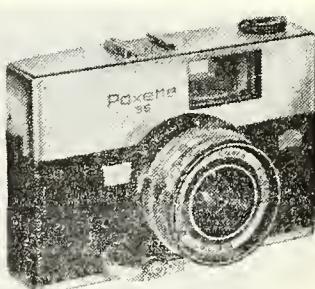
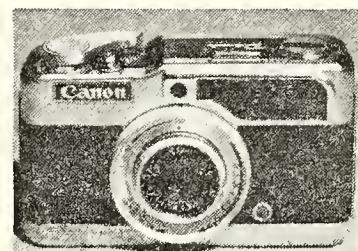
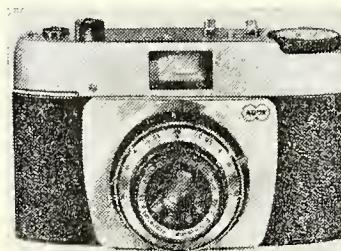
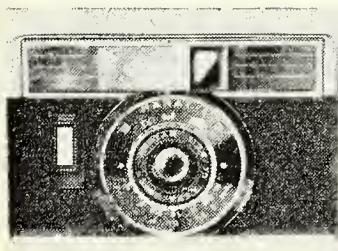
So extended and expensive has this international exhibition become that it is now proposed that the next shall be held in 1966—a gap of three years instead of the predicted two. Industries in every country are finding it increasingly difficult to produce enough new goods for each occasion, and in consequence, a steady development of existing products is replacing the introduction of novelties.

all models, simple zone settings are ample in view of the great depth-of-field available with such short-focal-length lenses.

The alternative trend seems to be directly towards what has previously been known as "subminiature"—that is, cameras using 16-mm. film and providing a variety of picture sizes depending on whether double or single perforated stock was used. One of the surprises of the exhibition was the introduction of such a camera by FRANKE & HEIDECKE, the Rollei 16—a jump straight from 2½ in. sq. In making that introduction the Rollei organisation has been instrumental, with other manufacturers, in stabilising the new format by conforming to a new manufacturing standard, DIN 19022. The new standard, which will almost certainly be adopted in due course by the British Standards Institution and the American Standards Association, should help the dealer by reducing to a minimum the number of different sizes of "subminiature" packings in both black-and-white and colour film stocks. The standard is primarily concerned with the dimensions and construction of the cassette and the use of 16-mm. single-perforation stock. It also calls for a set number of eighteen exposures, each 12 x 17 mm., and edge-numbering in pairs of



flash unit of the same width and depth as the camera body and extending it by a couple of inches only. The Edixa promotion material describes the camera as "a picture pocket-book," and the new format is offered as a second camera of special appeal to ladies. At the 1963 Photokina far more attention appeared to have been paid to the possibilities of extending the attractions of photography and cinematography to women by stressing simplicity and light-



NEWCOMERS : From left to right: the Parat 1, Adox Polo 1, Canon Demi, and Paxette 35.

At present opinions are divided about the likely future of cameras taking picture sizes less than the conventional "miniature" of 24 x 36 mm. One marked trend is towards what is currently referred to as "half-frame," that is, 18 x 24 mm. [the original "single-frame" size being based on the silent-film frame size of motion-picture film, from which the Leica size was developed] and a number of cameras exploiting the half-frame format were on show. Among them were the completely new Parat 1 and its automatic-exposure version, the Paramat 1, both manufactured by AGFA.

Another camera in the same format was the latest Canon Demi. Both feature lenses having a maximum aperture of f/2.8, with focal lengths of 30 mm. in the Agfa and 28 mm. in the Canon. Though focusing is provided on

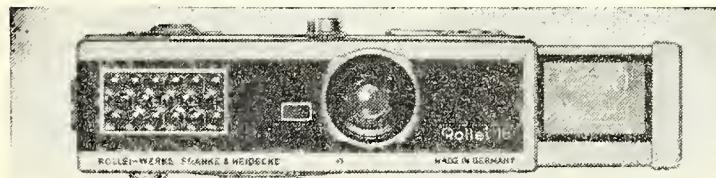
numbers between adjacent perforations. It is understood that, though one manufacturer in Germany was about to go into production with a new camera of that format, the introduction of the model was delayed so that it might conform to the new standard.

The WIRGIN CO., Wiesbaden, has taken the direct step from conventional 35-mm. to 16-mm. It was showing for the first time at Photokina the Edixa 16, which accepts cassettes to the new DIN standard mentioned. The new cameras have the features that would be expected on cameras of larger format, including lever wind, frame counter, rewind, etc. The Rollei 16 and the Edixa 16 are both fitted with lenses having a maximum aperture of f/2.8 and a focal-length of 25 mm. The former camera has provision for an extremely small and neat clip-on battery-capacitor

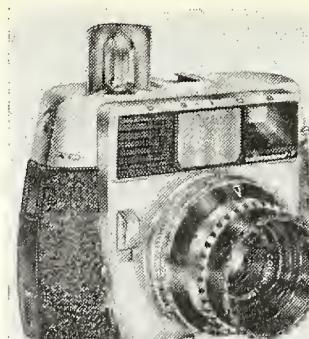
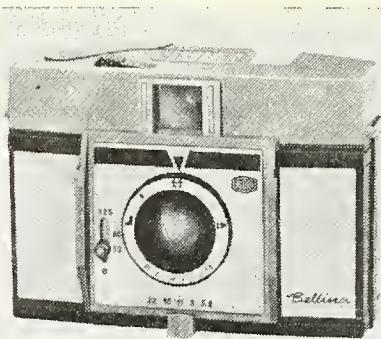
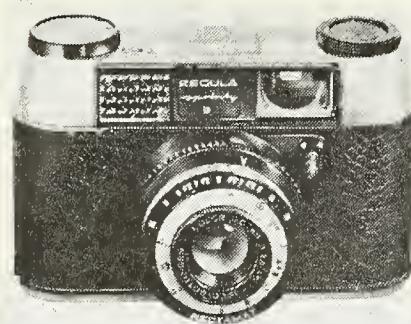
ness—"hand-bag size items" in fact.

Another marked trend in several manufacturers' future production programmes was exemplified in the new Paxette 35 range of CARL BRAUN, Nürnberg, in which the same body and shape serves for four variations. The first, a relatively simple camera, features an f/2.8 lens of 45-mm. focal length in a Prontor 125 shutter; the next (the 35 B) is similarly equipped but has a built-in exposure meter. The third model (the 35SB) is similar to the 35B, but possesses a Prontor 250-S shutter, while the fourth—the 35 Auto—has automatic exposure and a coupled range-finder. [The German prices range from DM84, then DM134, and DM159 to DM189. As a rough guide, a camera costing DM84 would probably retail in Great Britain at about £12. but those figures are given for comparison purposes only.]

In the Regula Sprint series of cameras, well known in Britain, the three models have been augmented by the introduction of the Sprinty B, with the new feature of a built-in shock-resistant exposure meter. At the top end of the scale is the new "Sprintomatic."

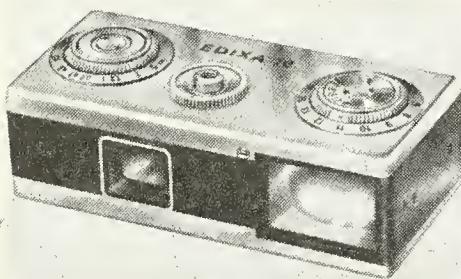


The "subminiature" Rollei 16 is fitted with a f/2.8 lens with focal length of 25 mm., and has provision for a small clip-on battery-capacitor flash unit.



Left to right: The Regula Sprinty, Bellina and Baldessamat-F with built-in lens hood and flash gun.

Though there is now no doubt that the 35-mm. camera virtually dominates the "still" camera field, there remain innumerable simple cameras taking 127 film and producing 4 x 4-cm. pictures. An example is the Boy range introduced by Bilora so long ago as 1950, of which already over 1 million have been sold.



Edixa 16 "subminiature" camera.

Not surprisingly Messrs. Bilora have introduced a new model of the same format, the Bellina, a light-weight, plastic camera of refined design, with rectangular extendable lens "tube" carrying a three-element f/5.6 lens in three-speed (1/30, 1/60, and 1/125 sec., and B) shutter. Click settings for aperture and speed are provided, and the film advance is by lever. Even if the film has been wound on and the shutter thereby set, the release button, on closing the lens tube into the body, sinks into the camera and is then locked against accidental exposure. Once again the manufacturers stress the possibilities of the camera "in the hands of a lady."

As opposed to the more spectacular innovations, the well-known Adox Polo 1 has been improved by careful development work, especially on the view-finder. The same makers have introduced a new and smaller flash unit to slide into the accessory shoe. The camera (the Electra 15) is being sold at "an exceptionally attractive price."

In the ciné field, 16-mm. may now be considered as of prime interest only to the professional film-maker and tele-

vision camera-man. In the 8-mm. range there has been an outpouring of new cameras of all shapes and sizes. It was estimated that there were more than 100 cameras on offer at Photokina, ranging from the most inexpensive to the latest, complex, automatic-exposure controlled, power-zoom lens types (such as have been introduced by both Agfa and Zeiss Ikon). The "zoom" lens, hand- or power-controlled, has now virtually supplanted the two- or three-lens turret models.

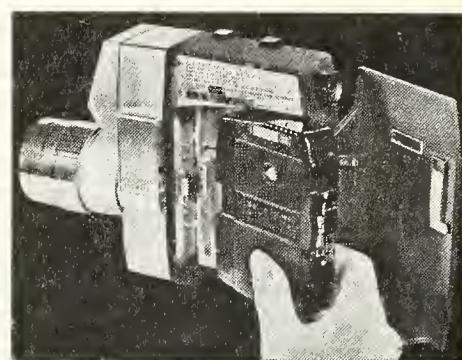
Another typical design change is the almost universal fitting of a pistol grip to cameras of either square or rectangular shape. In some instances the handle serves merely to support the camera; in others the release trigger is brought out to a convenient operating position. Yet again the grip may contain batteries for the main motor-drive, or batteries and motor for power-operation of the "zoom" lens.

A further surprise was the return of cassette loading, as incorporated in the new Bell & Howell "optronic-eye" camera, which combines the advantages of magazine and spool-loading cameras. The cassette is loaded with a standard double-run 8-mm. spool. After exposing the first side, the cassette is simply turned over for the second run through. The Agfa Movex reflex also features cassette loading.

Stress is being laid on cassette loading as providing greater simplicity of operation [as already indicated by the recently introduced Instamatic range of still cameras by Kodak, Ltd. (see *C. & D.*, March 9, p. 253)]. Those also attracted much attention at Photokina, and it is understood that licences for the

manufacture and filling of the cassettes by other film makers have already been freely offered by the originators of the system. Despite the fact that there were some misgivings by dealers about the introduction of yet another film size and loading, at least one other camera manufacturing company in Germany is understood to have been considering the introduction of a camera that will accept the new style cartridge or cassette.

Final impressions of this year's exhibition are that the day of unusual novelties has gone. Steady development will now supersede spectacular improvements, and competition will probably grow keener in all branches of the in-



A cassette being inserted, like a cartridge, into a Bell & Howell Auto Load "optronic-eye" 8-mm. camera.

dustry, with stress on attracting women to take up photography in its simplified forms and on camera owners' buying a second, simpler camera for their less serious work.

## WILLS

MR. W. B. DOW, M.P.S., 269 Golders Green Road, London, N.W.11, left £145,916 (£143,939 net).

MR. G. H. HAWKINS, M.P.S., Mirabel, Western Lane, Minehead, Somerset, left £22,892 (£22,608 net).

MR. W. HAY, F.P.S., Winestead Hall, Wimborne, Dorset, left £103,089 (£100,397 net).

MR. V. C. HEWLETT, 4A Bench Street, Dover, Kent, who qualified as a pharmaceutical chemist in 1903, left £4,238 (£4,028 net).

MISS GWENDOLEN C. LEWTHWAITE, M.P.S., 17 Longmeadow Road, Saltash, Cornwall, left £4,951 (£4,849 net).

MR. C. D. MCBAIN, M.P.S., 20 Grange Loan, Edinburgh, left estate in England valued at £2,866 (£2,821 net).

DR. J. J. MACKEY, M.P.S.I., 81 Upper George's Street, Dun Laoghaire, co. Dublin, Eire, left estate in England and the Republic of Ireland valued at £10,575.

MR. J. P. MARMION, F.P.S., 14 St. Michaels Road, Maidstone, Kent, left £18,660 (£18,529 net).

MR. H. O. MEEK, M.P.S., 52 Patrick Road, West Bridgford, Notts, a former examiner to the University of Wales and to the Pharmaceutical Society, left £4,123 (£4,068 net).

MR. H. A. NAYLOR, M.P.S.I., Pearse Street, Athlone, co. Westmeath, Eire, left estate in England and the Republic of Ireland valued at £15,321.

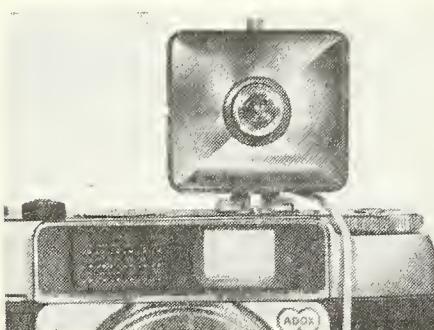
MR. E. W. PATRIDGE, Aigburth House, Aigburth Vale, Liverpool, who qualified as a chemist and druggist in 1899, left £12,340 (£12,263 net).

MR. E. E. ROBERTS, M.P.S., Charlton, 13 St. Julian's Avenue, Newport, Mon., left £23,428 (£23,346 net).

MR. F. K. ROWE, M.P.S., Orchard Cottage, Cliff Drive, Canford Cliffs, Bournemouth, Hants, left £3,621 (£3,514 net).

MR. ROWLAND SMITH, 190 Clee Road, Grimsby, Lincs, who qualified as a chemist and druggist in 1915, left £11,756 (£11,697 net).

MR. E. J. SANDS, St. Dunstans West House, Portland Place, Brighton, Sussex, who qualified as a chemist and druggist in 1909, left £6,589 (£6,544 net).



Adox flash unit fitted to the Adox Polo 1.

## DIRECTORY OF COLOUR PROCESSING SERVICES

ADOXCOLOR negative film processing	Cambs Dumbarton Eire Kent London	Fencolor Colorfoto Lyall Smith Associated Ancor	Kent Lanes	Associated Napcolor Ormskirk Rose (4) Fielding & Varey Haagman Johnsons Jones & Bailey Kay Olympic Photo Labs Reeds Top Rank Supercolour Norfolk	Eire Lanarks Gloucs Hants Kent	Lyall Smith Argus Temple Arris Associated Colour Labs (1)	
ADOXCOLOR reversal film processing	Midlothian Norfolk Sussex Warwicks all areas	Jones & Bailey Tait Top Rank Norfolk Millcolor Munacolor Adox	London	Fielding & Varey Haagman Johnsons Jones & Bailey Kay Olympic Photo Labs Reeds Top Rank Supercolour Norfolk	Lancs	Napcolor Ormskirk Rose (4) Allcolour Ancor Colour Labs (2) Fielding & Varey Haagman Johnson Jones & Bailey Photo Labs Supercolour Top Rank	
AGFACOLOR negative film processing	Cambs Ches Dumbarton Eire Lanarks Gloucs Hants Kent	Fencolor Rose (1) (2) Colorfoto Lyall Smith Argus Temple Arris Associated Colour Labs (1)	Northumber- land Oxfordshire Sussex Warwicks	Turners Rose (3) Millcolor Bircolour Munacolor Photo Finishers Stocks Teescolour	Midlothian Norfolk Northumber- land Oxfordshire Warwicks	Tait Norfolk Turners Rose (3) Bircolour Munacolor Photo Finishers Stocks	
AGFACOLOR reversal film processing	Lancs	Napcolor Ormskirk Rose (4) Allcolour Ancor Fielding & Varey Photo Labs Haagman Johnson Jones & Bailey Photowork Supercolour Top Rank	E2, E3 E2, E3, EH E2, EH E2, E3, EH E3	Lanarks London Herts Midlothian London	Film Services Humphries Kay Reed Rank	Middlesex	GEVACOLOR reversal film processing
ANSCOCHROME (Regular and Super) film processing	London	Cambs Dumbarton Eire Lancs London	EKTACHROME ciné film processing	Middlesex Cambs Dumbarton Eire Kent London	Fencolor Colorfoto Lyall Smith Colour Labs (1) Allcolour Ancor Colour Labs (2) Fielding & Varey Haagman Johnson Kay Photo Labs Photowork Supercolour Top Rank	Cambs Dumbarton Eire London	IKOLOR negative film processing
ANSCOCHROME ciné film processing	Midlothian Norfolk Northumber- land Oxfordshire Sussex Warwicks	Tait Norfolk Turners Rose (3) Millcolor Bircolour Munacolor A. H. Leach Photo Finishers Stocks Teescolour	EKTACOLOR negative film processing	Cambs Dumbarton Eire Kent London	Fencolor Colorfoto Lyall Smith Colour Labs (1) Allcolour Ancor Colour Labs (2) Fielding & Varey Haagman Johnson Kay Photo Labs Photowork Supercolour Top Rank	Midlothian Sussex all areas	ILFOCHROME film processing
ANSCOCHROME subminiature reversal film processing	Eire London	Agfacolor Agfa	Midlothian Norfolk Northumber- land Sussex Yorks	Midlothian Norfolk Northumber- land Sussex Yorks	Turners Millcolor A. H. Leach Photo Finishers Teescolour	Cambs Dumbarton Eire Lanarks London	ILFOCOLOR film processing
ANSCOLOR film processing	Bucks Cambs Dumbarton Eire Lancs London	Colour Centre Fencolor Colorfoto Green Napcolor Allcolour Ancor Haagman Jones & Bailey	FERRANIACOLOR reversal film processing	Cambs Ches Cornwall Dumbarton Hants Kent Lanarks Gloucs Lancs	Fencolor Rose (1) (2) Newquay Colorfoto Arris Associated Border Temple Napcolor Ormskirk Rose (4) Shaw Ancor Fielding & Varey Haagman Johnsons Jones & Bailey Photo Labs Top Rank	Midlothian Norfolk Warwicks Yorks	KODACHROME reversal and ciné film processing (prepaid) (not paid) ciné film duplicates
EASTMANCOLOR negative film processing	Sussex Angus Bucks Eire all areas Cambs	Millcolor Microfilms Colour Centre Green Colour Centre Fencolor	Leics London	Leics London	A. H. Leach Photo Finishers Teescolour Turners Millcolor A. H. Leach Photo Finishers Teescolour Fencolor Rose (1) (2) Newquay Colorfoto Arris Associated Border Temple Napcolor Ormskirk Rose (4) Shaw Ancor Fielding & Varey Haagman Johnsons Jones & Bailey Photo Labs Top Rank	Midlothian Norfolk Warwicks Yorks	9.5 mm. KODACOLOR negative film processing
EASTMANCOLOR ciné film processing	Midlothian London	Humphries Kay	Midlothian Northumber- land Oxfordshire Sussex Warwicks	Midlothian Northumber- land Oxfordshire Sussex Warwicks	Tait Turners Rose (3) Millcolor Bircolour Munacolor Top Rank	all areas	Kodak (14)
EKTACHROME film processing All types	Middlesex	Rank	FERRANIACOLOR negative film processing	all areas	Top Rank	all areas	Kodak (8)
	Cambs Ches Cornwall Dumbarton Gloucs Hants	Fencolor Rose (1) (2) Newquay Colorfoto Temple Arris	FERRANIACOLOR ciné film processing	all areas	Ferraniacolor	Middlesex	Colour- Technique
			GEVACOLOR negative film processing	Cambs Ches	Fencolor Rose (1) (2)	Cambs Ches Dumbarton Eire Lanarks Gloucs Hants Herts Kent Lancs	Pathéscope (2) Fencolor Rose (1) (2) Colorfoto Lyall Smith Argus Temple Arris Kodak (8) Associated Colour Labs (1) Napcolor Ormskirk Rose (4) Ancor Colour Labs (2) Fielding & Varey Haagman Johnson Jones & Bailey Kay Photo Labs Photowork

		Supercolor
		Top Rank
Midlothian	Tait	
Norfolk	Norfolk	
Northumber-		
land	Turners	
Oxfordshire	Rose (3)	
Sussex	Millcolor	
Warwicks	Bircolour	
	Munacolor	
Yorks	Photo Finishers	
	Stocks	
	Teescolour	
MINOX	all areas	Jones & Bailey
subminiature		
film processing		
negative film		
PATHESCOPE	London	Haagman
ciné film		
processing		
PERUTZ COLOR	all areas	Johnson
reversal film		
processing		
SAKURACOLOR	Yorks	Teescolour
negative film		
(accepted for		
dispatch)		
TELCOLOR	Cambs	Fencolor
negative film	London	Ancor
processing		
	Midlothian	Grant
	Warwicks	Jones & Bailey
	all areas	Tait
TELCOLOR		Munacolor
reversal film		
processing		
VISTACOLOR	all areas	Grant
film processing		

## ENLARGEMENTS

(a) of trans-	Dumbarton	Colorfoto
parencies	Eire	Green
(complete or	Lanarks	Argus
sectional)	Gloucs	Temple
	Hants	Arris
	Herts	Kodak (8)
	London	Allcolour
		Johnson
		Kay
		Supercolor
	Midlothian	Tait
	Warwicks	Bircolour
		Munacolor
	Yorks	A. H. Leach
		Photo Finishers
		Teescolour
(b) Enlarged	Cambs	Fencolor
prints from	Ches	Rose (1) (2)
all negatives	Dumbarton	Colorfoto
	Eire	Lyall Smith
	Lanarks	Argus
	Hants	Arris
	Kent	Associated
		Colour Labs (1)
	Lancs	Napcolor
		Ormskirk
		Rose (4)
	London	Colour Labs (3)
		Haagman
		Johnson
		Jones & Bailey
		Photo Labs
		Supercolor
		Top Rank

## EXTENDED NAMES AND ADDRESSES

Adox=ADOX 18 PROCESSING STATION, Box 109, Cumberland Avenue, Willesden, London, N.W.10.

Agfa=AGFA, LTD., Deer Park Road, London, S.W.19.

Agfacolor=AGFACOLOR PROCESSING WORKS, Lyall Smith Laboratories, LTD., 8 Terenure Road East, Dublin, 6

Allcolour=ALLCOLOUR SERVICES, 148 Southampton Row, London, W.C.1.

Ancor=ANCOR COLOURPRINT LABORATORIES, LTD., Ormond House, Boswell Street, London, W.C.1.

Argus=ARGUS LABORATORIES (SANDY WALKER, LTD.), Boydstone Road, Thornliebank, Glasgow.

Arris=ARRIS PHOTOGRAPHIC SERVICES, LTD., 37 Denmark Road, Winton, Bournemouth, Hants.

Associated=ASSOCIATED CINÉ EQUIPMENTS, LTD., 49A Bellegrove Road, Welling, Kent.

Bircolour=BIRMINGHAM PHOTOFINISHERS, LTD., 300 Icknield Port Road, Birmingham, 16.

Colorfoto=SCOTTISH COLORFOTO, Alexandria, Loch Lomond, Dumbarton.

Colour Labs (1)=COLOUR PROCESSING LABORATORIES, LTD., Heath House, Edenbridge, Kent.

(KODAKCOLOR)	Herts	Kodak (8)
	Midlothian	Tait
	Norfolk	Norfolk
	Northumber-	
	land	Turners
	Oxfordshire	Rose (3)
	Sussex	Millcolor
	Warwicks	Bircolour
		Munacolor
	Yorks	Photo Finishers
(ANCOR)	all areas	Stocks
(ADOXCOLOR,		Teescolour
AGFACOLOR,		Ancor
GEVACOLOR,		
ILFOCOLOR,		
KODAKCOLOR)	Kent	Associated

**NEGATIVES**

from all transparencies	Cambs	Fencolor
	Dumbarton	Colorfoto
	Eire	Lyall Smith
	Kent	Colour Labs (1)
	London	Ancor
		Colour Labs (2)
		Fielding & Varey
		Johnson
		Jones & Bailey
		Kay
		Photo Labs
		Supercolor
		Top Rank
	Midlothian	Tait
	Norfolk	Norfolk
	Northumber-	Turners
	land	
	Yorks	Photo Finishers
from colour prints	Yorks	Teescolour

**PRINTS**

(a) from all negatives	Cambs	Fencolor
	Ches	Rosc (1) (2)
	Dumbarton	Colorfoto
	Eire	Lyall Smith
	Hants	Arris
	Kent	Kodak (8)
(KODAKCOLOR)		Associated
		Colour Labs (1)
	Lancs	Ormskirk
		Rosc (4)
	London	Allcolour
		Ancor
		Colour Labs (2)
		Johnson
		Kay
		Photo Labs
		Supercolor
		Top Rank
	Midlothian	Tait
	Norfolk	Norfolk
	Northumber-	Turners
	land	
	Yorks	Photo Finishers
(SAKURACOLOR)	Yorks	Teescolour
(ADOXCOLOR,		
AGFACOLOR,		
GEVACOLOR,		
ILFOCOLOR,		
KODAKCOLOR)	Kent	Associated
(b) from any transparency	Cambs	Fencolor
	Dumbarton	Colorfoto

Eire	Green
Gloucs	Lyall Smith
Hants	Temple
Herts	Arris
Kent	Kodak (8)
London	Colour Labs (1)
	Allcolour
	Colour Labs (2)
	Johnson
	Jones & Bailey
	Photo Labs
	Supercolor
	Top Rank
(TRANSCOLOR)	Midlothian
	Norfolk
	Warwicks
	Yorks
(ANCOR)	all areas
(TRANSPRINTS)	London

**TRANSPARENCIES**

(a) duplicate all sizes

Cambs	Fencolor
Ches	Rose (1) (2)
Dumbarton	Colorfoto
Eire	Green
Lanarks	Argus
Hants	Arris
Lancs	Ormskirk
London	Rose (4)
	Allcolour
	Ancor
	Kay
	Photowork
	Rank Tempo
	Norfolk
	Oxfordshire
	Sussex
	Yorks
35 mm.	London
35 mm., 120 all sizes on to 35 mm.	Eire
	Cambs
	London
	Jones & Bailey
	Top Rank
	Midlothian
	Gloucs
	Yorks
	all areas
	Warwicks
35 mm.	Kodachrome & Herts
	Ektachrome
	35 mm., 828 Superslides
(b) from all colour negatives (un- masked)	Kent
	Cambs
	Dumbarton
	London
	Jones & Bailey
	Top Rank
	Norfolk
	all areas
	Cambs
from KODA- COLOR negatives only	London
from AGFA- COLOR, EKTACOLOR, GEVACOLOR negative sheet film	Colour Labs (1)

Colour Labs (2)=COLOUR PROCESSING LABORATORIES, LTD., 20 Crown Passage, London, S.W.1.

Colour Labs (3)=COLOUR PROCESSING LABORATORIES LTD., 22 Buckingham Gate, London, S.W.1.

Colour-Technique=COLOUR-TECHNIQUE, LTD., 90c Field End Road, Eastcote, Pinner, Middlesex.

Colour Works=COLOUR PROCESSING WORKS, Church Road, Epsom, Surrey.

Fencolour=FENCOLOR LABORATORY, LTD., P.O. Box 47, Cambridge.

Ferraniacolor=FERRANIACOLOR U.K. PROCESSING LABORATORIES, Denham, Uxbridge, Middlesex.

Fielding & Varey=FIELDING & VAREY, LTD., 138 Kingston Road, London, S.W.19.

Film Services=COLOUR FILM SERVICES, LTD., 22 Portman Close, London, W.1.

Fotocolor=EXPRESS FOTOCOLOR LABORATORIES, Churcy Road, Epsom, Surrey.

Gevaert=GEVAERT LABORATORIES, Great West Road, Brentford, Middlesex.

Green=THE GREEN STUDIO, LTD., 118 St. Stephen's Green West, Dublin, 2, Eire.

Haagman=HAAGMAN COLOUR LABORATORIES, LTD., 71 Endell Street, London, W.C.2.

Humphries=GEORGE HUMPHRIES & CO., LTD., 71 Whitfield Street, London, W.1.  
 Ilford (1)=ILFORD, LTD., Colour Processing Unit, Box 2, Christopher Martin Road, Basildon, Essex.  
 Ilford (4)=ILEORD, LTD., Colour Processing Unit, Box 4, Basildon, Essex.  
 Ilford (8)=ILEORD, LTD., Colour Processing Unit, Box 8, Basildon, Essex.  
 Jersey=JERSEY PHOTO FINISHERS, 8 Union Street, St. Helier, Jersey, Channel Islands.  
 Johnson=JOHNSON PROCESSING LABORATORIES, LTD., 970 North Circular Road, London, N.W.2.  
 Jones & Bailey=JONES & BAILEY, LTD., 4 Mount Mills, London, E.C.1.  
 Kay=KAY LABORATORIES, LTD., Oxford Road, London, N.4.  
 Keig=S. R. KEIG & SON, Allen Bank Photo Works, Circular Road, Douglas, Isle of Man.  
 Kodak (8)=KODAK, LTD., Box 8, Hemel Hempstead, Herts.  
 Kodak (14)=KODAK, LTD., Box 14, Hemel Hempstead, Herts.  
 A. H. Leach=A. H. LEACH & CO., LTD., Photo Works, Brighouse, Yorks.  
 Lyall Smith=LYALL SMITH LABORATORIES, LTD., 8 Terenure Road East, Dublin, Eire.  
 Microfilms=MICROFILMS, LTD., 18 St. Andrews Street, Dundee.  
 Millcolor=MILLCOLOR, LTD., P.O. Box 11, 6 St. George's Place, Brighton, 1.  
 Munacolour=MUNACOLOUR LABORATORIES (MUNNS BROS., LTD.), 45 Camden Street, Birmingham, 1.  
 Napcolor=NAPCOLOR, LTD., 22 Grey Street, Manchester, 12.  
 Newquay=NEWQUAY COLOUR SERVICES, 21 Crantock Street, Newquay, Cornwall.  
 Norfolk=NOREFOLK COLOUR LABORATORIES (E. E. SWAIN, LTD.), 58 Westgate, Hunstanton, Norfolk.  
 Olympic=OLYMPIC PHOTOGRAPHIC CO., 37 Mardale Street, London, W.12.  
 Ormskirk=ORMSKIRK PHOTO SERVICES, LTD., Derby Street Laboratories, Ormskirk, Lancs.

Pathéscope (1)=PATHÉSCOPE (LONDON), LTD., Processing Department, Denham, Uxbridge, Middlesex.  
 Pathéscope (2)=PATHÉSCOPE (LONDON), LTD., 35 Sylvester Road, London, E.8.  
 Perutz=PERUTZ COLOUR SERVICE, LTD., P.O. Box 25, Stevenage, Herts.  
 Photo Finishers=PHOTO FINISHERS (SHEFFIELD), LTD., Union Road, Sheffield, 11.  
 Photo Labs=PHOTO LABORATORIES (LONDON), LTD., 2 Wrentham Avenue, Kensal Rise, London, N.W.10.  
 Photowork=PHOTOWORK, LTD., 13 Charterhouse Street, London, E.C.1.  
 Rank=RANK LABORATORIES (DENHAM), LTD., Denham, Uxbridge, Middlesex.  
 Reed=REED'S COLOUR FILM LABORATORIES, 89 Wardour Street, London, W.1.  
 Rose (1)=WILL R. ROSE, LTD., Hamilton Place, Chester.  
 Rose (2)=WILL R. ROSE, LTD., 3 Hopes Carr, Stockport, Cheshire.  
 Rose (3)=WILL R. ROSE, LTD., 20 St. Abbes Street, Oxford.  
 Rose (4)=WILL R. ROSE, LTD., Grantham Street Works, Oldham, Lancs.  
 Scott=H. Y. SCOTT, LTD., Wellington Street, Gravesend, Kent.  
 Shaw=HARPER SHAW, Far Street, Wymeswold, Loughborough, Leics.  
 Stocks=GEO. STOCKS & CO., P.O. Box 7, Lower Clark Street, Scarborough, Yorks.  
 Supercolour=SUPERCOLOUR LABORATORIES, LTD., 98 Wardour Street, London, W.1.  
 Tait=HAMILTON TAIT, LTD., Penicuik, Midlothian.  
 Teescolour=TEESCOLOUR COLOUR FILM PROCESSORS, 59 Gresham Road, Middlesbrough, Yorks.  
 Temple=TEMPLE PHOTO SERVICE (Victor Latty, Ltd.), 133 Duckmoor Road, Bristol, 3.  
 Top Rank=TOP RANK FILM PROCESSING DIVISION, Cumberland Avenue, London, N.W.10.  
 Turners=TURNERS (COLORFOTO), LTD., Camera House, Pink Lane, Newcastle-on-Tyne, 1.

## “Any Questions?” at Hertford

### A DISTINGUISHED PANEL PROVIDES SOME ANSWERS

A DISTINGUISHED panel had been engaged by Hertfordshire Branch of the Pharmaceutical Society to answer members' questions at Hertfordshire on March 21. It comprised Lord Balniel (local Member of Parliament); Messrs. G. Bird (Branch chairman and a retail pharmacist); W. L. Jeffrey (Burroughs Wellcome & Co.), and C. McArdle (group chief pharmacist, United Birmingham Hospitals). Mr. C. D. Buzzard was in the chair.

MR. C. J. KITCH asked what the panel considered the rôle of the pharmacist in the National Health Service to be. MR. BIRD felt that pharmacists could not play their full part without proper remuneration, adequately safeguarded. Pharmacists were capable, for example, of providing centres for the dissemination of information, sterile-syringe and biochemical-analysis facilities, and a better oxygen service.

MR. MCARDLE said that the pharmacist of the future would have more of an advisory capacity as, with the increase in new drugs, doctors could not keep abreast of developments. While deprecating the action of the Minister of Health in reducing oncst, he considered the pharmacist was a poor public relations officer for himself, because customers were not made to realise the value of the service they were being given. Mr. McArdle thought all drugs should be obtainable only through a pharmacy.

MR. JEFFREY defined the pharmacist's rôle as ensuring that the patient received accurately what the doctor prescribed. Though the pharmacist was well qualified to do more than was asked of him, he had to devote much of his time to making a living.

LORD BALNIEL, though he "came to learn what pharmacists were thinking," said that their rôle was basic to the National Health Service. He would like to see pharmacists undertaking wider duties, but was it not the doctor's own responsibility to keep up to date? The

advice the pharmacist gave to his customer was admittedly unpaid, as was much of the work done by any profession, but it was appreciated.

MR. W. C. E. HAYES asked the panel whether the educational standard for pharmacists was too high in view of the duties they performed. MR. MCARDLE replied that, once the standard was allowed to fall, the profession was doomed. The training was required to enable the pharmacist to keep himself informed. LORD BALNIEL pointed out that other professions were raising their standards. MR. JEFFREY agreed that a reduction would be suicide, but said that, if the pharmacist's only claim to fame was his merchandising ability, the qualifications were not entirely those necessary.

MR. W. O'NEILL asked how the panel could reconcile the ridiculous professional fee of 1s. 2½d. with their answers to previous questions. LORD BALNIEL felt that all professions were underpaid compared with other sections of the community, but the Government was right to ask employees not to take more from the economy than was put into it. MR. BIRD said oncst financed stocks, which were out of the pharmacist's control, being dependent on doctors' prescribing habits. Yet the Minister of Health had introduced a sliding scale so that, the more work the pharmacist did, the less he was paid.

LORD BALNIEL: "Surely the sliding scale helps the smaller pharmacist?"

MR. BIRD said that many chemists were turning away from dispensing.

MR. D. EVANS said that the Minister of Health had encouraged the purchase of continental drugs. Was the panel concerned about that hazard to employees in the pharmaceutical industry? MR. JEFFREY replied that the N.H.S. was the industry's only customer in Britain. That was too many eggs in one basket, and most manufacturers were trying to increase business in the export field. When they spoke to purchasing

officers of the emerging countries they were asked how they could speak about British quality when the Ministry of Health was buying from the continent. MR. McArdle's view was the use of Section 46 of the Patents Act for the purchase of those drugs was not the intention of the Act. Along that line the Government would have to subsidise the industry if it were to survive. The consumer had the right to expect first-class drugs. For those British firms could not be beaten. LORD BALNIEL agreed that life had been saved and economies made by drugs but, where drugs of comparable quality were available more cheaply, there was no reason to protect British industry with a tariff. Royalties enabled companies to protect themselves and the speaker considered that Section 46 had been designed *only* for the purpose for which it was being used. MR. JEFFREY challenged the reference to the soaring drug bill. That increase, he said, was small compared with other items in the Health Service, and it was partly due to the increase in numbers of old people who required drugs. He reminded Lord Balniel that the industry had not been worried at the prospect of entering the battlefield of the Common Market—the saving of the £4 million made by the Minister was small against the £50 millions the industry exported. LORD BALNIEL thought that the small amount was not going to break the industry.

MR. R. M. KEEN asked whether the panel thought it desirable that the retail pharmacist should be obliged to sell a wide range of merchandise to subsidise the National Health Service. MR. BIRD'S view was that the pharmacist could not lower quality in order to economise, and so many were giving up N.H.S. as unprofitable. LORD BALNIEL agreed that it was a bad thing that pharmacists should be forced to sell other products in order to maintain a reasonable standard of living.

MRS. B. M. DEARNE asked what the

panel thought, in the light of findings in Birmingham, of the use of cheap and substandard drugs being condoned by the Ministry of Health. MR. MCARDLE, vouching for the Birmingham findings, said that, though the existence of substandard capsules had been brought to the notice of the Controller of Supplies, no action had been taken to withdraw them from the rest of the country. Any definition of quality must include formulation. If an inferior drug was bought, where was the saving? MR. JEFFREY said that most British manufacturers worked to standards higher than those of the *British Pharmacopæia*. LORD BALNIEL said that re-

sponsibility for the drugs he used lay with the doctor. MR. JEFFREY pointed out that the doctor went by the label and depended on the brand name the Ministry discouraged him from using.

THE CHAIRMAN then read a question relating to losses incurred by pharmacists when purchase-tax rates were changed. MR. BIRD said that the public expected to have immediate benefit from reductions and delay in increases. Purchase tax was part of the retailer's stock, and the wholesaler and manufacturer were unpaid tax collectors. A tax based on the returns of sales the retailer made to the Inland Revenue should be substituted.

MR. P. H. MARRIOTT asked what changes the panel would like to make in the National Health Service. MR. MCARDLE wanted to see the abolition of the drug testing scheme. MR. BIRD the inclusion of the general practitioner in the hospital service and the removal of Mr. Powell as Minister of Health! LORD BALNIEL looked for improvements in mental hospitals and a change in the regional hospital board system. He would also like to see some form of independent drug testing. MR. JEFFREY wished that "less of a political football" could be made of a wonderful service that only needed its links examined before going further forward.

## Dispensing Costs Inquiry

### N.P.U. SPEAKER DESCRIBES ACTIVITY SAMPLING TECHNIQUE

THE opinion that there was a grave possibility that the Minister of Health might interpret the results of the 1962-63 dispensing costs inquiry to the further detriment of chemist contractors was expressed by several members of the South-eastern Federation of Pharmacists at a meeting held in Lewes on March 21. MR. JOHN FERGUSON (National Pharmaceutical Union) had earlier explained reasons why the Central N.H.S. (Chemist Contractors) Committee had thought it necessary to initiate another inquiry, and had related some of his experiences as a member of the team making the inquiry.

Convinced that the Ministry of Health would refuse to consider any claim for an increase in remuneration unless up-to-date facts and figures were given to support the arguments put forward, and that there must be no repetition of the large-scale postal inquiries of previous years, which had necessitated the completion of complicated forms and resulted in such a poor response, the Committee sought advice from experts in statistical sampling techniques. A pilot survey was carried out so that the problems and difficulties were thrown into relief, and it was ascertained that a sample of 210 contractors would be sufficient to provide the necessary accuracy so long as an "activity sampling technique" was used in the stage of the inquiry to determine the labour costs of providing the N.H.S. dispensing service.

#### Visits and Detailed Investigations

The chosen firm of industrial consultants worked out details of the investigation, and it was decided that, while the 210 pharmacies in the sample were being visited by the observers, a detailed investigation should be carried out on twenty contractors in the sample, so that standards could be established and information provided for the second stage of the inquiry, which was to consist of the completion of a detailed questionnaire by the contractor's accountant and of a simpler questionnaire by the contractor.

A statistical sample had to be chosen at random and at the same time to be representative of all sizes and types of N.H.S. business throughout England and Wales. Thirty-five Executive Council areas were so chosen; six contrac-

tors in each area were then selected statistically so that all sizes and types of business were represented in the same proportion in the sample as throughout the country. Since observers were to visit the pharmacies, travelling would have been a problem in the large areas such as Yorkshire if it had not been decided that in the large Council areas pharmacies would, so far as possible, be chosen in one Parliamentary constituency.

#### Mechanics of Activity Sampling

Activity sampling is a development of time-and-motion study. Records are made at intervals throughout a period instead of being continuously recorded. The interval fixed in the particular inquiry was two minutes. The principle was to record, by means of a code letter, what a person was doing at exact two-minute intervals throughout the day. The following heads were used:—

- (a) Dispensing—principal work;
- (b) Dispensing—ancillary work;
- (c) General activities common to dispensing and retail activities;
- (d) No activity;
- (e) Absence;
- (f) Other business.

While the activity sampling was being undertaken, a second stage, that of preparing the questionnaire, was going on. Each team consisted of one representative from the Contractors' Committee and one from the Ministry of Health. The contractors' representatives were either pharmacists or had spent their lifetime in pharmacy. There were seven teams of observers who worked six days a week for five consecutive weeks. The study began at 9 a.m. and finished at 6 p.m., and visits to all 210 premises were completed on time without one missed date. The visits were only just completed before the winter snows.

The day's work usually began by meeting the manager or proprietor at each shop at 8.45 a.m. to explain the procedure, and to reassure the staff that the object of the exercise was not to find out which of them could be made redundant. From 9 o'clock onwards at the prescribed two-minute intervals (in a few instances where the size of the shop made a two-minute interval impracticable a four-minute interval was adopted) the observer recorded what

was being done by each member of the staff who might possibly be doing anything at all towards N.H.S. (for example bottle washers, counter assistants who handed out prescriptions, dispensary assistants, buyers).

The recording continued until 6 p.m., when prescriptions were counted and marked and totals taken for hosiery, D.D.A., oxygen and private prescriptions. Details were taken of wages paid to all staff except the proprietor or manager, and their hours of work and any fringe benefits noted. The proprietor was asked to estimate the time he spent outside normal opening hours in doing ancillary work such as sorting prescriptions, banking, stock checking and ordering, etc. A form was given to the proprietor or manager on which he was asked to give details of his salary and any other benefits accruing from his job, and he was asked to post the form direct to the consultants on completion. The forms on which the activity sampling was recorded were totalled and posted each day to the consultants who checked them for any atypical results.

The questionnaire to the accountant asked for a breakdown of the accounts for one completed financial year: N.H.S. receipts, information about prescription numbers, stock valuation, rent, rates and depreciation.

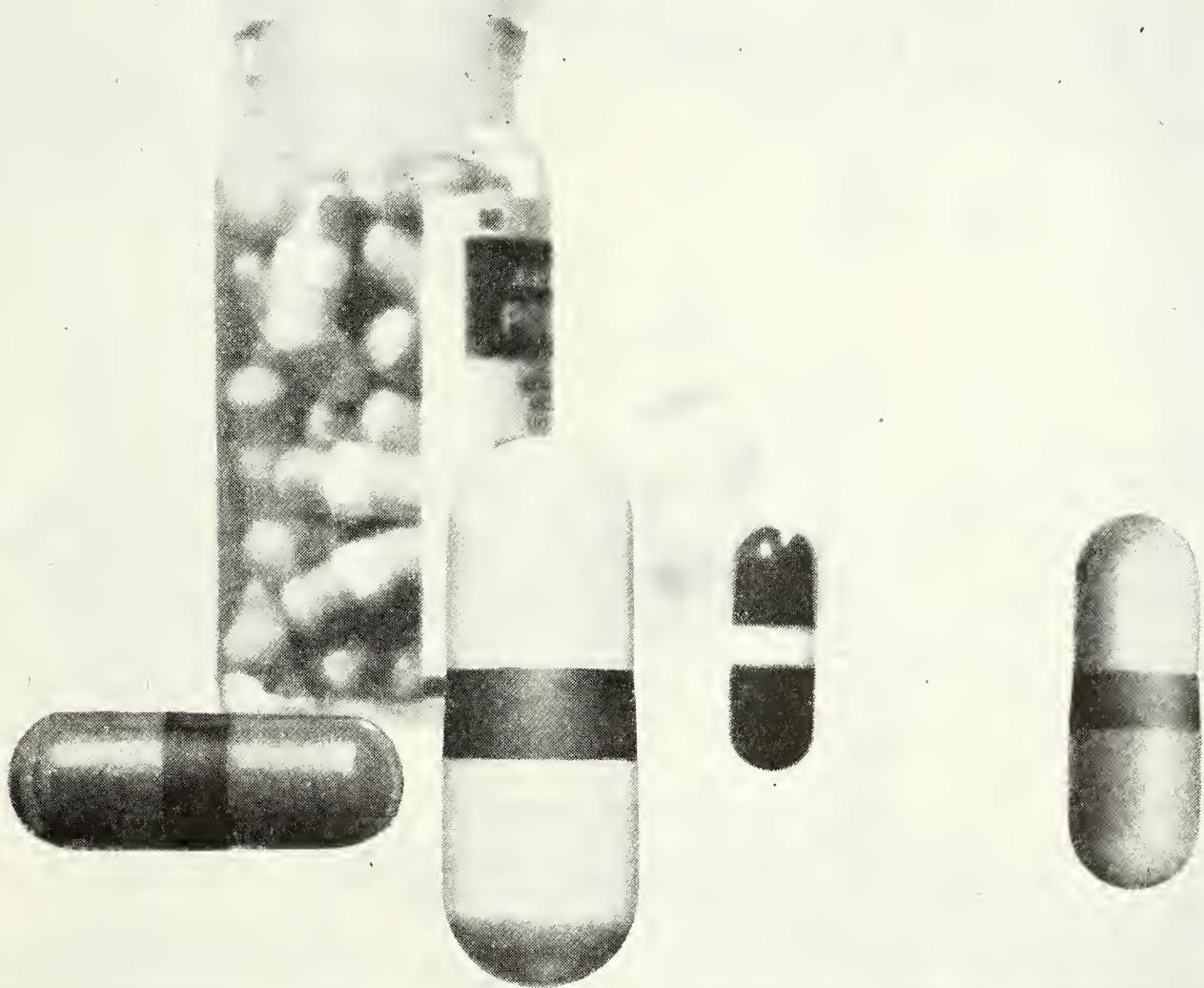
The pharmacist was asked to describe the type of locality, and to state any advantages and disadvantages of his trading position, whether the premises were rented or owned, details of "dead" stock, with value of stock written off each year, floor areas of shop, dispensary, stock-rooms, etc., so that property charges could be apportioned.

#### A Complete Picture

Mr. Ferguson believed that the necessary information had been collected in a form that was useable, and many details as to how results would be interpreted had been agreed with the Ministry before the information was collected. No one could guarantee that an increase in remuneration would result from the inquiry, but one thing was certain. Every possible detail had been considered, and every possible care taken to make sure that the information collected would show the true position of the contractor chemist.

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## TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, MARCH 27: There were no bright spots in the CRUDE DRUGS market during the week and trading in ESSENTIAL OILS was on a lower level than usual.

ALOES remained in fairly tight supply with little or no near-at-hand offered. HONEY prices continued to harden, and most sources were fully 10s. per cwt. up. At the moment, and while the small stocks remain, Jamaican honey appears to offer the best value. MENTHOL was substantially unchanged. Shipment prices for Jamaican and Cochin GINGERS were a little easier. QUILLAIA was offered for shipment at 137s. 6d. per cwt., c.i.f., whilst spot was unchanged at 180s. Holders of SENEGA reduced their prices by threepence per lb., following lower offers at origin.

Future PEPPER prices may be affected by recent floods in Sarawak. There are also rumours that the crop has been affected by root disease. SUGAR prices continue to move up. In the past six months it has risen from £26 per ton to £62.

Ceylon CITRONELLA OIL was down by twopence per lb. for shipment, but Formosan and Chinese material were each sixpence dearer than last week. The deterioration in LEMONGRASS prices was halted, spot and forward values being threepence up on the week. PEPPERMINT (*Arvensis*) prices, however, continued to slide, both Chinese and Brazilian again being lower. English ALMOND OIL was dearer but imported oil showed little change.

AMMONIUM CARBONATE and BICARBONATE were marked up, some former manufacturers of the two salts having withdrawn from the market. MAGNESIUM HYDROXIDE and light MAGNESIUM OXIDE have also been marked up, the latter by about eightpence per lb.

## Pharmaceutical Chemicals

ADRENALINE. — (Per gm.). Synthetic B.P. 1-kilo lots, 11d.; 500 gm., 1s. 1d. ACID TARTRATE, B.P., 1 kilo, 7½d.; 500 gm. 9d.

AMMONIUM BICARBONATE. — B.P. powder £54 10s. per ton; CARBONATE, £83 10s. for lump and £87 10s. for powder. All in 1-cwt. free kegs.

AMMONIUM CHLORIDE. — One-cwt. lots B.P. powder, 105s. per cwt.; technical, 55s.

AMMONIUM SULPHATE. — One-cwt. lots 10d. per lb. for B.P.C. grade.

BACITRACIN. — Sterile topical is 53s. per mega unit for 25 m.u.

BORAX. — B.P. grade, 1 ton and upwards: Granular, £54 10s.; crystals, £58; powder, £59; extra fine powder, £60 per ton, all in hessian sacks. Less £1 for paper bags. Commercial from £44 10s. to £51 per ton, as to type and packing. Dehydrated borax is £60 per ton in hessian bags or £59 in paper bags; carriage paid in Great Britain. Surcharges for small quantities: Less than 1 ton but not less than 5 cwt., 1s. per cwt.; 3 cwt., 2s.; 1 cwt., 3s.

BORIC ACID. — B.P. grade in 1 ton and upwards (per ton): Granular, £88; crystals, £97; powder, £94 10s.; extra-fine powder, £96 10s. per ton in lined hessian bags, carriage paid in Great Britain. Less £1 per ton if supplied in paper bags. Technical from £74 to £84 10s. per ton according to type and packing.

## BROMIDES.—Crystals (per lb.):—

		1 cwt.		5 cwt.	
		s. d.	s. d.	s. d.	s. d.
POTASSIUM	...	2	6	2	5
SODIUM	...	2	6	2	5
AMMONIUM	...	2	10	2	8½

Powder is three-halfpence per lb. more, packages free, carriage paid terms.

CHALK.—Prepared powder B.P., £22 per ton for minimum 1-ton ex works.

## CITRATES.—Per kilo:—

		50 kilos	250 kilos	500 kilos	
		s. d.	s. d.	s. d.	
SODIUM†	...	4	9	4	9
POTASSIUM†	...	4	11½	4	5
IRON AND					
AMMONIUM*	...	7	7	7	0

† Powder 6d. per kilo more. \*Scales 1s. 10d. per kilo more.

HOMATROPINE. — 16-oz. lots (per oz.): ALKALOID, 30s. 6d.; HYDROBROMIDE, 24s. 6d.; HYDROCHLORIDE, 28s. 6d.; METHYLBROMIDE, 25s. 6d. 1-oz. rates are 1s. 6d. per oz. above those rates.

HYDROQUINONE.—One-cwt. lots, 10s. per lb., 1-ton, 8s. 6d.

MAGNESIUM CARBONATE. — Per cwt. LIGHT, 129s. or 121s. for 1-ton lots; HEAVY, 175s. for 1-cwt. lots; from 130s. to 135s. for 1-ton lots.

MAGNESIUM CHLORIDE.—One-cwt. kegs, 3s. 3d. per lb.

MAGNESIUM HYDROXIDE.—B.P.C., 1-cwt. lots, 3s. 11d. per lb.; 1-ton, 3s. 6d. per lb.

MAGNESIUM OXIDE, B.P.—LIGHT, 1-cwt. lots, 3s. 10d. per lb., 1-ton, 3s. 7d.; HEAVY, 5s. 10d. per lb.

MAGNESIUM PEROXIDE.—B.P.C. (15 per cent.), 3s. 11d. per lb. for 1-cwt. lots.

MAGNESIUM PHOSPHATES: DIHYDROGEN, 1-cwt. lots, 4s. per lb.; TRIBASIC, 4s. 5d. lb.

MAGNESIUM SULPHATE. — B.P. in minimum 1-ton lots from £20 to £21 per ton according to crystal and manufacturer. Exsiccated, £56 per ton.

MAGNESIUM TRISILICATE.—(Per lb.). In 28-lb. packages:—28-lb., 4s. 9½d.; 1-cwt. 3s. 10d.; 5-cwt., 3s. 7d.; 1-ton, 3s. 1d.

PILOCARPINE.—In 1-kilo lots prices are: HYDROCHLORIDE, 1,375s. per kilo; NITRATE, 1,128s.

QUINIDINE.—For 15 kilos or 500 oz. or more:—

Home Trade	Per kilo	Per 100 oz.
QUINIDINE	s. d.	s. d.
SULPHATE	199 1	564 6
ALKALOID cryst.	260 8	739 1

Prices include tins and cases and free delivery U.K.

QUININE. — 1,000-oz. lots:—ALKALOID 3s. 11½d. per oz.; SULPHATE, B.P., 1932, 2s. 5½d.; SULPHATE, B.P., 1958, 2s. 8½d.; BISULPHITE, 2s. 6½d.; DIHYDROCHLORIDE, 3s. 7½d.; HYDROCHLORIDE, 3s. 3½d.; ETHYL CARBONATE, 4s. 5d.; HYDROBROMIDE, 3s. 2½d. SALICYLATE, 4s. 1½d.

SALOL.—B.P.C., 9s. per lb. (1-cwt. lots).

SODIUM ACETATE. — B.P.C., one cwt., 2s. 5d. per lb.

SODIUM BENZOATE. — One-ton lots, 2s. 7½d. per lb.; 1-cwt., 2s. 9½d.

SODIUM BICARBONATE.—B.P., 1-cwt. bags, £19 3s. per ton for 8-ton lots.

SODIUM BROMATE. — One-cwt., 9s. 9d. per lb.

SODIUM CARBONATE.—B.P.C. exsiccated, 70s. per cwt.; 5-cwt., 65s. per cwt. Washing soda crystals 23s. 6d. ton in 4-ton lots.

SODIUM CHLORIDE. — Vacuum-dried, 172s. 9d. per ton in paper sacks for 6-ton lots, delivered London.

SODIUM FLUORIDE. — B.P.C. 1934, one-cwt. kegs, 3s. 11d. per lb.

SODIUM HYDROXIDE. — FLAKE, one-cwt. lots, 7d. per lb., £36 15s. per ton in 8-ton lots. STICKS, 4s. 5d. lb. in 14-lb. tin.

SODIUM METABISULPHITE. — Granular, 1-cwt. lots, ninepence per lb.

SODIUM NITRITE.—B.P.C. One-cwt. kegs, 2s. 7d. per lb.

SODIUM PERBORATE.—(Per ton). TETRAHYDRATE (minimum 10 per cent. available oxygen) £142 5s. in 1-cwt. kegs; £134 15s. in 1-cwt. bags; PERBORATE MONOHYDRATE (minimum 15 per cent. available oxygen) is £309 15s.

SODIUM PERCARBONATE. — (Per ton) £173 15s. in kegs (bags £7 10s. per ton lower) for minimum 12½ per cent. available oxygen.

SODIUM PHOSPHATE. — B.P. (1-cwt.), 2s. 3d. per lb.; ACID, B.P.C., 2s. 9d.

SODIUM SALICYLATE. — One-ton lots in bulk, 3s. 9d. per lb.; 5-cwt., 3s. 10d.; 1-cwt., 4s.

SODIUM SULPHATE. — B.P. from £30 to £36 per ton as to crystal. B.P. exsiccated about £66 per ton.

SODIUM SULPHIDE.—In 1-ton lots: Solid, £39 2s. 6d.; broken, £40 2s. 6d.; flake, £41 12s. 6d.; crystals, £30.

SODIUM THIOSULPHATE. — Photographic crystals in paper-lined bags, £38 per ton.

TERPIN HYDRATE.—Less than 12½ kilos, 11s. 6d. per kilo.

## Industrial Chemicals, Solvents

ACETALDEHYDE. — The 100 per cent. is £122 per ton.

ACETATES. — Per ton, spot in drums: AMYL, 10-cwt. lots, technical, £254 and B.S.S., £256. BUTYL, 1-ton lots, £149; ETHYL, £124; ISOBUTYL (80 per cent.), £118; ISOPROPYL, £119.

ACETIC ANHYDRIDE. — 12-ton lots £108 per ton; 2½-ton, £112 in bulk.

ACETONE.—One-ton lots spot, £74 per ton in drums.

N-BUTYL ALCOHOL. — One-ton lots in drums, £131 10s. per ton and one-drum lots, £138 10s. per ton.

CARBON TETRACHLORIDE. — In 40-gall. drums, 1 ton and under 2 tons, £83 15s.; 4 tons and upwards, £82 5s.

ISOPROPYL ALCOHOL. — Technical grade (99 per cent.) in tank car lots from 4s. 6d. to 4s. 8d. per gall.; anhydrous in drums, 7s. 1d. to 7s. 4½d. per gall.; in bulk, 6s. 11d. to 7s. 1d.

METHYL ETHYL KETONE.—One-ton lots, £121 10s. per ton in drums.

NAPHTHALENE. — Contract rates for phthalic grade are from about £27 per ton upwards in bulk, ex works; lower crystallising whizzed grades from £20 to £25 per ton ex works; ball and flake, £71.

PHthalates. — Prices (per ton) one-ton lots in drums: DI-BUTYL, £182; DI-ISOBUTYL, £175; DI-ETHYL, £174; DI-METHYL, £163.

PHthalic ANHYDRIDE.—Domestic material quoted at £90 per ton.

STEARATES. — Spot prices for minimum 1-ton lots:—ALUMINIUM (all grades), 253s. 6d. per cwt. CALCIUM (precipitated), 243s. 6d. LEAD (30 per cent.), 223s. 6d.; MAGNESIUM (standard), 272s. and (superfine), 302s.; ZINC, 226s. to 286s. as to grade.

**Crude Drugs**

**ACONITE.** — Spot: Spanish *napellus*, 2s. 9d. per lb.

**ALOES.** — Spot primes, 195s. per cwt., extra primes, 202s. 6d.; shipment, extra primes, 215s., c.i.f., nominal; primes, May-June, 190s., c.i.f. Curaçao, spot, 350s.; shipment, 340s., c.i.f.

**ARROWROOT.** — St. Vincent, superfine sifted, 1s. 6d. per lb., spot.

**BELLADONNA.** — LEAVES, 0·6 per cent. 2s. 3d. per lb., duty paid. Root, testing over 0·5 per cent., 1s. 10d. per lb.

**BUCHU.** — Spot, 3s. 10d. per lb.; shipment, 3s. 9d., c.i.f.

**CALUMBA ROOT.** — Mozambique spot, 85s. per cwt.; 70s., c.i.f.

**CAPSICUMS.** — East African on stalk, 150s. per cwt.; Ethiopian, 145s.

**CARDAMOMS.** — Aleppy greens 8s. 6d. per lb. spot; shipment, 7s. 9d., c.i.f. Seeds, spot, Whole, 16s. 6d.; splits, 10s. 3d.

**CASCARA.** — Spot, 210s. per cwt.; shipment, 200s., c.i.f.

**CHAMOMILE.** — Roman-type, 7s. per lb.; Belgian new crop offers vary between 10s. and 14s. per lb. for forward delivery. Matricaria, 7s. 6d. on the spot.

**CLOVES.** — Zanzibar spot, 2s. 10½d. per lb. standard grade; shipment, 2s. 7½d., c.i.f.

**COCHINEAL.** — Canary Isles black-brilliant nominal; silver-grey nominally 15s. per lb., c.i.f. Peruvian, silver-grey, 10s., c.i.f.

**COLOCYNTH PULP.** — Spot and shipment nominal.

**DIGITALIS.** — *Purpurea* leaves, 2s. 8d. to 3s. per lb., c.i.f., as to potency.

**ELEMI.** — Spot, 1s. 6d. per lb. Shipment, 1s. 1d., c.i.f.

**GINGER.** — (Per cwt.). African shipment, 310s., c.i.f. Jamaican No. 3 spot, nominal; new-crop for April-May shipment, 575s., c.i.f. Cochin, spot, 205s.; prompt shipment, 182s. 6d., c.i.f.

**HENNA.** — Indian, spot, about 80s. per cwt.; shipment, 65s., c.i.f.

**HONEY.** — (Per cwt.). Australian light amber, 132s. 6d. to 137s. 6d. and medium amber 130s. to 135s. Argentine, 135s. to 140s.; Jamaican, 115s. to 125s.; Canadian, 165s. to 170s.; Mexican, 127s. 6d. to 132s. 6d.; all ex warehouse.

**JUNIPER BERRIES.** — Hungarian, 95s. per cwt.; German, 145s. spot.

**KARAYA.** — No. 1 gum, spot nominal; No. 2, 280s. per cwt.

**LANOLIN.** — ANHYDROUS B.P. is from 170s. to 190s. per cwt. in 1-ton lots delivered, free drums.

**LEMON PEEL.** — Spot, 2s. 3d. per lb.

**LINSEED.** — Whole, 72s. 6d. per cwt.; crushed, 102s. 6d.

**LIQUORICE.** — Natural root: Russian, 65s. per cwt.; Anatolian, 57s. 6d.; Persian, 52s. 6d.; Sicilian 1-kilo bundles, 1s. 6d. per lb. Block juice: Anatolian from 200s. per cwt.; Italian stick from 329s. to 470s. per cwt.

**LOBELIA HERB.** — American spot, 6s. 3d. per lb.

**MACE.** — Whole, pale blade, 15s. per lb. spot.

**MALEFERN.** — Root for shipment quoted at 75s. per cwt., c.i.f.

**MENTHOL.** — Chinese: spot, 44s. per lb. duty paid; April-May shipment, 38s. c.i.f. Brazilian 20s. to 20s. 6d. in bond; shipment, 18s. 6d. to 20s. c.i.f. Formosan, 28s. 6d. in bond; shipment, 27s. 6d. c.i.f.

**NUTMEGS.** — West Indian 80's, 6s. 6d. per lb. spot; sound unassorted, 4s. 3d.; defectives, 3s. 4½d.

**NUX VOMICA.** — Cochin, 75s. per cwt. on the spot.

**PAPAIN.** — No. 1 from 35s. to 45s. per lb., spot as to quantity. For shipment: East African, 32s., c.i.f.

**PEPPER.** — White Sarawak spot, 3s. 3d. per lb.; shipment, 3s. 1d., c.i.f. Black Sarawak spot, 2s. 5½d.; shipment, 2s. 3½d., c.i.f. Black Malabar, 320s. per cwt. spot; shipment, 265s., c.i.f.

**PIMENTO.** — Spot 616s. per cwt.; shipment, 580s., f.o.b.

**PYRETHRUM.** — Extracts—partially dewaxed, 25 per cent. pyrethrins, 74s. 6d. to 65s. 6d. per lb.; decolorised dewaxed, 20 per cent., 66s. 6d. to 59s. 4d. per lb.

**QUASSIA.** — Spot, 57s. 6d. per cwt.

**QUILLIAIA.** — Spot, 180s. per cwt.; shipment, 137s. 6d., c.i.f.

**RHUBARB.** — Supplies of good pinky rounds cleared on the spot; shipment offers scarce.

**SAFFRON.** — Mancha superior, 160s. per lb. spot.

**SARSAPARILLA.** — Jamaican native red spot, 2s. 8d. per lb.; shipment, 2s. 4d., c.i.f.

**SEEDS.** — (Per cwt.). **ANISE.** — Spanish, 265s., duty paid. **CARAWAY.** — Dutch, 153s. 6d., duty paid. **CELERY.** — Indian, 240s., spot; shipment, current crop, 190s., c.i.f.; new crop June-July, 162s. 6d., c.i.f. **CORIANDER.** — Moroccan little easier at 60s., duty paid; shipment, 45s., c.i.f. **CUMIN.** — Iranian, 172s. 6d., duty paid; shipment, 136s., c.i.f. **DILL.** — Indian offered at 80s., spot; shipment firmer at 60s., c.i.f. **FENNEL.** — Indian now at 125s. spot; shipment, current crop 120s.; new crop 127s. 6d., c.i.f. **FENUGREEK.** — Moroccan, 57s. 6d., duty paid; shipment unchanged at 43s. 6d., c.i.f. **MUSTARD.** — English, 55s. to 75s., according to quality.

**SENEGA.** — Spot, 14s. 6d. per lb.; shipment, 14s., c.i.f.

**SENNNA.** — (Per lb.). *Tinnevelly* LEAVES, spot: Prime No. 1, 2s. 3d.; prime No. 2, 1s. 9d.; No. 3, f.a.q., 1s. 4d. PODS: hand-picked spot scarce at from 3s. 3d. to 3s. 6d., as to quality: manufacturing spot, 2s. 4d. *Alexandria* pods: Manufacturing, spot cleared: forward, 2s. 6d. to 2s. 9d. per lb. ex wharf; hand-picked small lots from 4s. 9d. to 8s. 6d. as to quality.

**SHELLAC.** — F.O.T.N., 192s. 6d. per cwt.; No. 1, 207s. 6d.; F.O., 225s. to 275s.

**SQUILL.** — White 80s. per cwt. on the spot.

**STRAMONIUM.** — Continental LEAVES 85s. per cwt. spot.

**STYRAX.** — Spot, 22s. per lb.; shipment, 21s., c.i.f.

**TONQUIN BEANS.** — Para spot, 5s. 6d. per lb.; shipment, 4s. 10½d., c.i.f.; Trinidad, 7s. 6d., spot.

**TRAGACANTH.** — No. 1 ribbon, £132 10s. to £135 per cwt. No. 2, £125 to £127 10s. c.i.f.

**TURMERIC.** — Madras finger spot, 190s. per cwt. quoted; shipment, new crop March-April, 117s. 6d. to 120s., c.i.f.

**VALERIAN ROOT.** — Spot: East European, 175s. per cwt.; Indian, 180s. Shipment: Continental, 172s. 6d. to 205s. 6d. c.i.f.

**VANILLIN.** — Rates (per lb.) are now:— 5-cwt. lots, 21s. 6d.; 1-cwt., 21s. 9d.; 56-lb., 22s.; small quantities, 22s. 6d.

**WAXES.** — (Per cwt.): **BEES'** — Dar-es-Salaam, spot 485s. nominal; shipment, 467s. 6d., c.i.f. Abyssinian spot 410s. in bond; for April shipment, 390s., c.i.f. Sudanese, spot, 450s.; shipment, April, 390s., c.i.f. **CANDELILLA.** — spot, 465s.; forward, 460s. landed. **CARNAUBA.** fatty grey, spot, 320s.; shipment, 290s., c.i.f.; prime yellow, spot, 625s.; shipment, 615s., c.i.f.

**WITCH HAZEL LEAVES.** — Spot quotations are 2s. 10d. per lb.

**Essential and Expressed Oils**

**ALMOND.** — Sweet, English expressed, 9s. 6d. per lb.; foreign, 5s. 3d.

**AMBER.** — Rectified on the spot, 1s. 6d. per lb.

**ANISE.** — Chinese, 20s. per lb., spot; shipment, 18s. 6d., c.i.f.

**BERGAMOT.** — Spot, about 84s. per lb.

**BIRCH TAR.** — Rectified, 8s. per lb.

**CADE.** — Spanish, 2s. 6d. per lb. for drum lots.

**CALAMUS.** — Spot, about 56s. per lb.; shipment, 38s., per lb., c.i.f.

**CAMPHOR, WHITE.** — Chinese, 2s. 7d., duty paid, per lb.; shipment, 1s. 9d., c.i.f., nominal.

**CANANGA.** — Spot, 27s. per lb.

**CEDARWOOD.** — Rectified 6s. per lb. on the spot.

**CINNAMON.** — From quillings, best English-distilled, 520s. to 800s. per lb. as to quantity; other B.P. oils from 22s. per lb. Ceylon leaf, 12s.; Seychelles, 8s., spot.

**CITRONELLA.** — Ceylon, spot, 9s. 4½d.; shipment, 8s. 9d. per lb., c.i.f. Formosan nominally 15s. in bond; April shipment, 14s. 9d., c.i.f.; Chinese, spot cleared; May-June shipment, 14s. 6d., c.i.f.

**CLOVE.** — Madagascar leaf spot, 7s. 3d. per lb., duty paid; shipment, 6s. 1½d., c.i.f. **RECTIFIED** 87-88 per cent., 12s. Distilled bud-oil, English B.P., 27s. lb. for 1-cwt. lots.

**CORIANDER.** — B.P. oil, 41s. per lb., spot.

**CUBEB.** — Spot supplies of imported are 85s. per lb.

**CUMIN.** — English distilled oil, 130s. per lb.; imported, 85s.

**GERANIUM.** — Bourbon, 90s. to 100s. per lb. on the spot.

**JUNIPER.** — B.P.C. 1949 oil is from 13s. 6d. per lb. **JUNIPER WOOD.** from 5s.

**LAVANDIN.** — From 11s. to 12s. 9d. per lb. as to quality.

**LEMON.** — Spot from 34s. to 42s. 6d. per lb., as to quality. Sicilian for shipment, 44s. to 47s. per lb., c.i.f.

**LEMONGRASS.** — Spot, 11s. 9d. per lb.; shipment, 11s. 6d., c.i.f.

**ORANGE.** — Floridan sweet oil 7s. per lb. South African and Rhodesian, 7s. 6d.; Israeli, 5s.; West Indian, 10s.; Spanish, 19s. 6d., spot.

**PEPPERMINT.** — *Arvensis*: Chinese spot, 16s. 6d.; shipment, 15s. 6d., c.i.f. Brazilian spot, 6s.; shipment, 5s. 9d., c.i.f. *Piperita*: Italian, 48s. to 70s., spot. American from 35s. to 38s. 6d. per lb. as to make.

**ROSEMARY.** — Spanish genuine is 9s. per lb. spot.

**RUE.** — Spanish is 23s. 6d. per lb., spot.

**SAGE.** — Spanish, 9s. per lb.; Dalmatian, 18s. 6d.

**TANGERINE.** — Sicilian machine pressed, 52s. 6d.; sponge pressed, 65s. per lb., nominal.

**YLANG-YLANG.** — Best oil quoted about 145s. per lb.

**UNITED STATES REPORT**

**NEW YORK, MARCH 26:** In CRUDE DRUGS, a good inquiry continues for a number of items that remain in short supply, including IPECACUANHA, BELLADONNA and DIGITALIS. CARNAUBA WAX prices are moving upwards at origin. Among ESSENTIAL OILS, the spot supply of LEMONGRASS is light but prices are lower at \$2 to \$2.10, reflecting the downward trend in shipping prices in India. The tone of Formosan CITRONELLA is strong with virtually no spot material available for resale.

## PRINT AND PUBLICITY

## PRESS ADVERTISING

ROBINSON & SONS, LTD., Wheat Bridge Mills, Chesterfield: Paddi-pads. In *Woman, Woman's Own* and other large circulation and specialist magazines.

SCHICK, INC. (U.K.), LTD., New Pound, Wisborough Green, Billingshurst, Sussex, Super speed shaver. In *Daily Express*, *Daily Mail*, *Daily Mirror*, *Daily Telegraph*, *TV Times*, *Radio Times* and *Reader's Digest*.

THAWPIT, LTD., Woodstock Grove, London, W.12, Thawpit. In women's magazines, household magazines and *Reader's Digest*.

WHITECROFT (LYDNEY), LTD., Lydney, Glos.: Rem-Lac lacquer removing shampoo. In *Woman, Woman's Own, Honey, True Romances, True Story, Boyfriend, Mirabelle/Marty, Marilyn, Valentine, Roxy and Teen*.

S. G. YOUNG (SALES), LTD., 154 Blackfriars Road, London, S.E.1: Kleen-Feed baby's feeding bottle. In national and provincial Press, women's medical and nursing magazines.

## DISPLAY MATERIAL

COUNTY LABORATORIES, LTD., Beecham House West, Brentford, Middlesex, Spacemaker display unit for Silvikrin, Vosene and Bristow's shampoos. Point-of-sale material for Brylcreem, REMINGTON ELECTRIC SHAVER, LTD., 26 Kensington High Street, London, W.8: Display material for Remington 25 electric shaver.

RENTOKIL LABORATORIES, LTD., 16 Dover Street, London, W.1: A new Tritox crowner featuring Fred Streeter is being made available to retailers this year.

## POSTERS

LASTONET PRODUCTS, LTD., Carn Brea, Redruth, Cornwall: Lastonet surgical hosiery, Lastorinse, Lastonet foot powder, Lastonet foot spray and Lastonet cream. Posters in London Underground stations and trains.

## COMMERCIAL TELEVISION

Figures in these columns represent number of appearances of the "spot" during the week.

April 7-13

	London	Midland	North	Scotland	Wales	South	N.E.	Anglia	Ulster	Westward	Border	Grampian	Eireann	Channel Is.	W. & N. Wales
4711 eau de Cologne ...	...	...	—	—	—	—	2	—	—	—	—	—	—	—	—
Alka Seltzer ...	...	...	5	2	5	—	5	5	—	5	5	5	5	—	5
Anadin ...	...	...	4	3	1	7	5	4	4	1	2	2	1	—	—
Askit ...	...	...	—	—	—	13	—	—	—	—	—	7	6	—	—
Beecham powders ...	...	...	4	4	4	3	2	3	4	3	3	3	3	—	—
Bristow's lanolin shampoo ...	...	...	2	2	4	2	1	2	2	2	—	2	—	—	—
Bunty Baby products ...	...	...	—	—	—	—	—	—	—	2	—	—	—	—	—
Cuticura ...	...	...	—	—	2	2	—	—	2	—	2	—	—	—	—
Delrosa rose hip syrup ...	...	...	2	3	3	3	2	2	2	1	2	—	—	—	—
Delsey ...	...	...	—	—	—	—	—	—	2	—	—	1	1	—	—
Dentosine ...	...	...	—	—	1	—	—	—	—	—	—	—	—	—	—
Dentyne ...	...	...	1	1	1	1	—	1	1	1	1	1	—	—	—
Dr. Wernet's powder ...	...	...	—	—	—	—	—	—	3	—	—	—	—	—	—
Eno's fruit salt ...	...	...	—	—	—	—	—	—	—	2	—	—	—	—	—
Immac ...	...	...	—	—	—	—	—	1	—	1	—	—	—	—	—
Izal toilet tissue ...	...	...	3	—	—	—	—	—	—	—	—	—	—	—	—
Kleenex ...	...	...	2	3	3	3	1	2	2	10	3	4	3	3	—
Loxene shampoo ...	...	...	—	1	—	—	—	—	—	—	—	—	—	—	—
Milk of Magnesia ...	...	...	2	2	1	2	2	3	2	2	2	2	2	—	—
tablets ...	...	...	2	2	2	2	2	2	2	2	2	2	—	2	3
Moorland tablets ...	...	...	—	—	—	—	1	—	—	2	—	—	—	—	—
Nivea creme ...	...	...	—	2	—	2	—	—	—	—	—	—	—	—	—
Penetrol inhalant ...	...	...	1	—	—	—	—	—	—	—	—	—	—	—	—
Phens'c ...	...	...	4	4	5	4	4	4	5	4	—	4	5	—	—
Phyllosan ...	...	...	3	3	3	—	3	3	3	—	—	—	—	—	—
Poli-grip ...	...	...	—	1	—	—	—	—	—	1	—	—	—	—	—
Rinstead pastilles ...	...	...	1	1	1	—	—	—	—	—	—	—	—	—	—
Rosedale Lano-spray ...	...	...	5	5	5	10	—	—	—	—	—	—	—	—	—
Salvelox ...	...	...	2	—	—	—	—	3	—	2	—	1	—	—	—
Setlers ...	...	...	3	2	3	3	4	4	4	4	—	4	—	—	—
Twice as Nice shampoo ...	...	...	—	—	—	—	3	—	—	—	—	—	—	—	—
VO5 conditioner ...	...	...	1	1	1	—	1	1	—	—	—	—	—	—	—
shampoo ...	...	...	—	2	2	3	3	—	—	—	—	—	—	—	—
spray ...	...	...	3	2	2	1	1	2	—	2	—	—	—	—	—
Yeast Vite ...	...	...	3	2	3	3	3	3	3	3	3	4	3	3	2
Zestone ...	...	...	1	—	—	—	—	—	—	—	—	—	—	—	2

## PUBLICATIONS

## Booklets and Leaflets

BRITISH CELLOPHANE, LTD., 9 Henrietta Place, London, W.1: "Higher Profits from Pharmaceuticals." Pp. 21.

CRODA, LTD., Crowick Hall, Snaith, Goole, Yorks: List of products (2-p, folder).

INTERNATIONAL NICKEL CO. (MOND), LTD., 20

Albert Embankment, London, S.E.1: Booklet listing technical publications available from the company.

JOHNSONS OF HENDON, LTD., 335 Hendon Way, London, N.W.4: "The Johnson Way to Better Photography." Pp. 65.

KODAK, LTD., Kingsway, London, W.C.2: "You've never seen a camera like this before." Pp. 14.

## COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

## Sunday, March 31

NATIONAL PHARMACEUTICAL UNION, Seabank hotel, Porthcawl, at 12.15 p.m. Area meeting.

## Monday, April 1

LABORATORY APPARATUS AND MATERIALS EXHIBITION, Earls Court, London, S.W.5. Until April 5.

SCOTTISH BUSINESS EFFICIENCY EXHIBITION, Kelvin Hall, Glasgow. Until April 6.

STOCKPORT BRANCH, PHARMACEUTICAL SOCIETY, Belgrave hotel, Dialstone Lane, Stockport, at 8 p.m. "General grumble evening."

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH, NATIONAL PHARMACEUTICAL UNION, Star hotel, Worcester, at 8 p.m. Mr. E. Neal on "Is it necessary for Pharmacy to be a Profession" and "Some financial aspects of the Report of the Committee on the General Practice of Pharmacy."

## Tuesday, April 2

CAMBRIDGE AND HUNTINGDON BRANCHES, PHARMACEUTICAL SOCIETY and NATIONAL PHARMACEUTICAL UNION, Owen Webb House, Gonville Place, Cambridge, at 8 p.m. Mr. C. H. Smith (vice-chairman, N.P.U.), on "Financial Implications of the Report of the Committee on the General Practice of Pharmacy."

DONCASTER BRANCH, PHARMACEUTICAL SOCIETY,

Weston club, Marr, nr. Doncaster, at 7.30 p.m. Dinner and dance.

GUILDFORD BRANCH, PHARMACEUTICAL SOCIETY, Prince of Wales hotel, Guildford, at 7.30 p.m. Annual meeting.

NORTH-WESTERN BRANCH, INSTITUTION OF CHEMICAL ENGINEERS, Manchester. Symposium: "Chemical Process Hazards with Special Reference to Plant Design," Until April 4.

PORTSMOUTH BRANCH, NATIONAL PHARMACEUTICAL UNION, Royal Beach hotel, at 7.30 p.m. Mr. H. W. Tomski on "Some Economic Aspects of Pharmacy."

WEMBLEY CHEMISTS' ASSOCIATION, Town hall, Wembley, Middlesex, at 8 p.m. Annual meeting. Mr. J. Anderson-Stewart (secretary, Middlesex Pharmaceutical Committee) on "Current Pharmaceutical Affairs."

## Wednesday, April 3

HOUNSLOW BRANCH, PHARMACEUTICAL SOCIETY, at 2.30 p.m. Visit to Metropolitan Water Board works, Hampton.

HULL CHEMISTS' ASSOCIATION, Royal Station hotel, at 8 p.m. Annual meeting.

MANCHESTER PHARMACEUTICAL ASSOCIATION (JUNIOR BRANCH), Woodlands hotel, Manchester. Dinner and dance.

SCHEFFIELD BRANCH, PHARMACEUTICAL SOCIETY, Royal Victoria hotel, at 8 p.m. Ladies' night. SOCIETY OF CHEMICAL INDUSTRY, Engineering laboratories, University of Bristol, Symposium: "Soil Analysis and its Relation to Plant Composition and Growth," Until April 5.

STOCKPORT BRANCH, PHARMACEUTICAL SOCIETY, Deanswater hotel, Stockport. Informal dance.

WESTERN PHARMACISTS' ASSOCIATION, Great Western Royal hotel, Paddington station, London, W.2, at 7.30 p.m. Grace La Rondie (chief beauty executive, Dorothy Gray, Ltd.) on "Chemistry and Good Looks."

## Thursday, April 4

DURHAM COUNTY BRANCH, PHARMACEUTICAL SOCIETY, Three Tuns hotel, New Elvet, Durham City, at 7.45 p.m. Annual meeting.

FOOD GROUP and BIRMINGHAM AND MIDLAND SECTION, SOCIETY OF CHEMICAL INDUSTRY, and MIDLAND SECTION, ROYAL INSTITUTE OF CHEMISTRY, Haworth Building, University of Birmingham, at 6.30 p.m. Dr. J. Hawthorn on "The Detection of Flavour."

LONDON SECTION, ROYAL INSTITUTE OF CHEMISTRY, County hotel, Canterbury, at 7.15 p.m. A lecturer from the Consumers' Association on "The Testing of Consumer Goods."

MANCHESTER PHARMACEUTICAL ASSOCIATION and BRANCH, PHARMACEUTICAL SOCIETY, lecture hall, Literary and Philosophical Society, 36 George Street, Manchester, at 7.45 p.m. Annual meeting.

BEDFORDSHIRE BRANCH, PHARMACEUTICAL SOCIETY, College of Technology, Luton, at 7.30 p.m. Post-graduate course: Dr. T. D. Whittet on "Chemotherapy of Malignant Disease."

BIOLOGICAL METHODS GROUP and NORTH OF ENGLAND SECTION, SOCIETY FOR ANALYTICAL CHEMISTRY, Evans Medical research laboratories, Speke, Liverpool, at 2 p.m. Works visit. At 6 p.m. Dr. E. M. Glaser on "Pharmacological Studies of Habituation."

BLACKPOOL BRANCH, PHARMACEUTICAL SOCIETY, Imperial hotel, Blackpool, at 7.45 p.m. Make-up demonstration by Yardley & Co., Ltd.

EXETER BRANCH, PHARMACEUTICAL SOCIETY, Royal Clarence hotel, at 7.45 p.m. Mr. D. F. Pearson (William Mason & Sons, Ltd., Leeds) on "Shop Fitting, Shop Planning and Merchandising."



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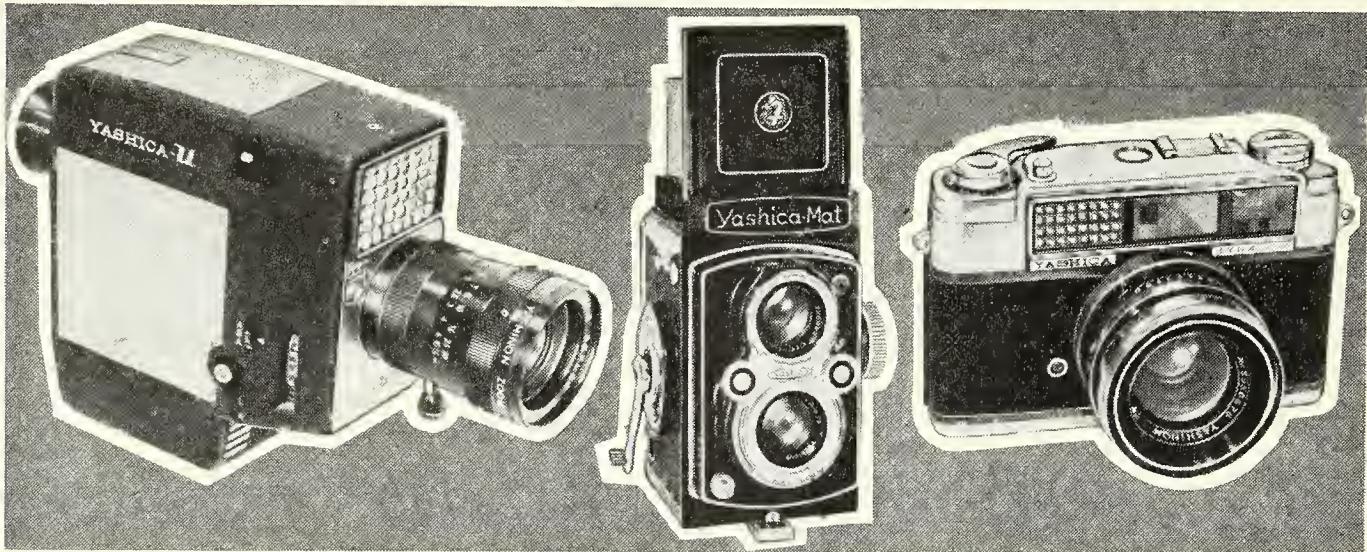
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# YASHICA RANGE FOR 1963

1962 was the first full year in which Japanese cameras became freely available in the U.K. This was the year in which Yashica established themselves as the biggest sellers among Japanese or any other cameras. We list below the models which are going to increase Yashica's lead in 1963.



## CINE CAMERAS

8 UOMATIC Reflex focusing through f/1.8 Yashinon Zoom lens. Built-in exposure meter. £68. 14. 2. inc. P. Tax.  
8 UG. A low-priced zoom. Reflex focusing through f1.8 Yashinon Zoom lens. Fully automatic exposure control. £39. 18. 7. inc. P. Tax.

8T3. Triple lens turret with f/1.4 D mount Yashinon, 6.5, 13 and 38 mm. Focusing lenses. £54. 6. 11. inc. P. Tax.  
8AIII. Triple turret with f/1.8 converter-type lenses, 9, 13 and 25 mm. £29. 10. 0. inc. P. Tax.

## 35 mm CAMERAS

35W with coupled rangefinder. Yashinon f/2.8 45 mm 4-element lens. £16. 16. 3. inc. P. Tax. E.R. Case £2. 1. 9. inc. P. Tax

35J as the 35W but having a delayed action release in shutter. £21. 17. 8d. inc. P. Tax. E.R. Case £2. 19. 4. inc. P. Tax.

35EE 2.8 and 1.9. With coupled rangefinder. Fully automatic exposure control. £36. 6. 7. and £39. 12. 10. respectively, inc. P. Tax.

FLASH-O-SET II With built-in flashgun taking standard P.F. bulbs and fully automatic exposure control. £24. 19. 11. inc. P. Tax. E.R. Case £2. 17. 0. inc. P. Tax.

LYNX f/1.8 45 mm Yashinon lens. Coupled rangefinder. 11 speeds. Built-in exposure meter. £49. 17s. 2. inc. P. Tax. E.R. Case £3. 9. 9. inc. P. Tax.

REFLEX J Single lens reflex with pentaprism viewfinder and automatic iris diaphragm with internal trip. £59. 18. 6d. inc. P. Tax. E.R. Case £4. 17. 8. inc. P. Tax.

RAPIDE 64  $\frac{1}{2}$ -frame pictures on 36 exp. film. f/2.8 28 mm Yashinon lens. Built-in exposure meter. £35. 19. 8. inc. P. Tax, inc. Case.

SEQUELLE  $\frac{1}{2}$ -frame camera. Built-in meter. Film transport by electric motor. With pistol grip, batteries and case £34. 10. 6. inc. P. Tax.

## REFLEX CAMERAS

YASHICAMAT. 2 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ ". 80 mm Yashinon lenses, f/3.5 taking, f3.2 viewing. 10 speeds: 1-1/500th sec. £39. 14. 7. inc. P. Tax. Case £3. 6. 4. inc. P. Tax.

635. 12 2 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " exp. on 120 film or 36 on 35 mm cassettes. F/3.5 80 mm Yashikor lenses. £32. 15. 8. inc. P. Tax. Case £2. 19. 4d. inc. P. Tax.

D. 2 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ ". f/3.5 80 mm Yashikor lenses. 10 speeds: 1-1/500th sec. XM synch. £28. 15. 5. inc. P. Tax. Case £2. 18. 2. inc. P. Tax.

A. 2 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ ". f/3.5 80 mm Yashimar lenses. 4 speeds: 1/25-1/300th sec., X synch. £19. 10. 11. inc. P. Tax. Case £2. 6. 6. inc. P. Tax.

44A. Takes 12 1 $\frac{5}{8}$ " x 1 $\frac{5}{8}$ " exp. on 127 film. Yashikor f/3.5 60 mm lenses. 4 speeds: 1/25-1/300th. £19. 10. 11d. inc. P. Tax. Case £2. 6. 6. inc. P. Tax.

44LM. Takes 12 exp. on 127 film. Built-in exposure meter. f/3.5 60 mm Yashinon lenses. 10 speeds: 1-1/500th sec. £34. 16. 4. inc. P. Tax. Case £2. 6. 6. inc. P. Tax.

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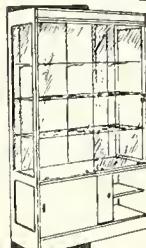
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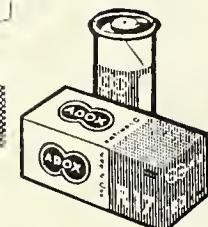
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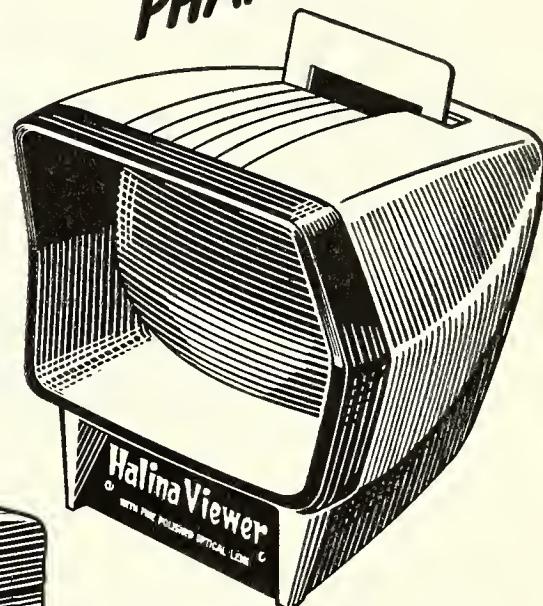
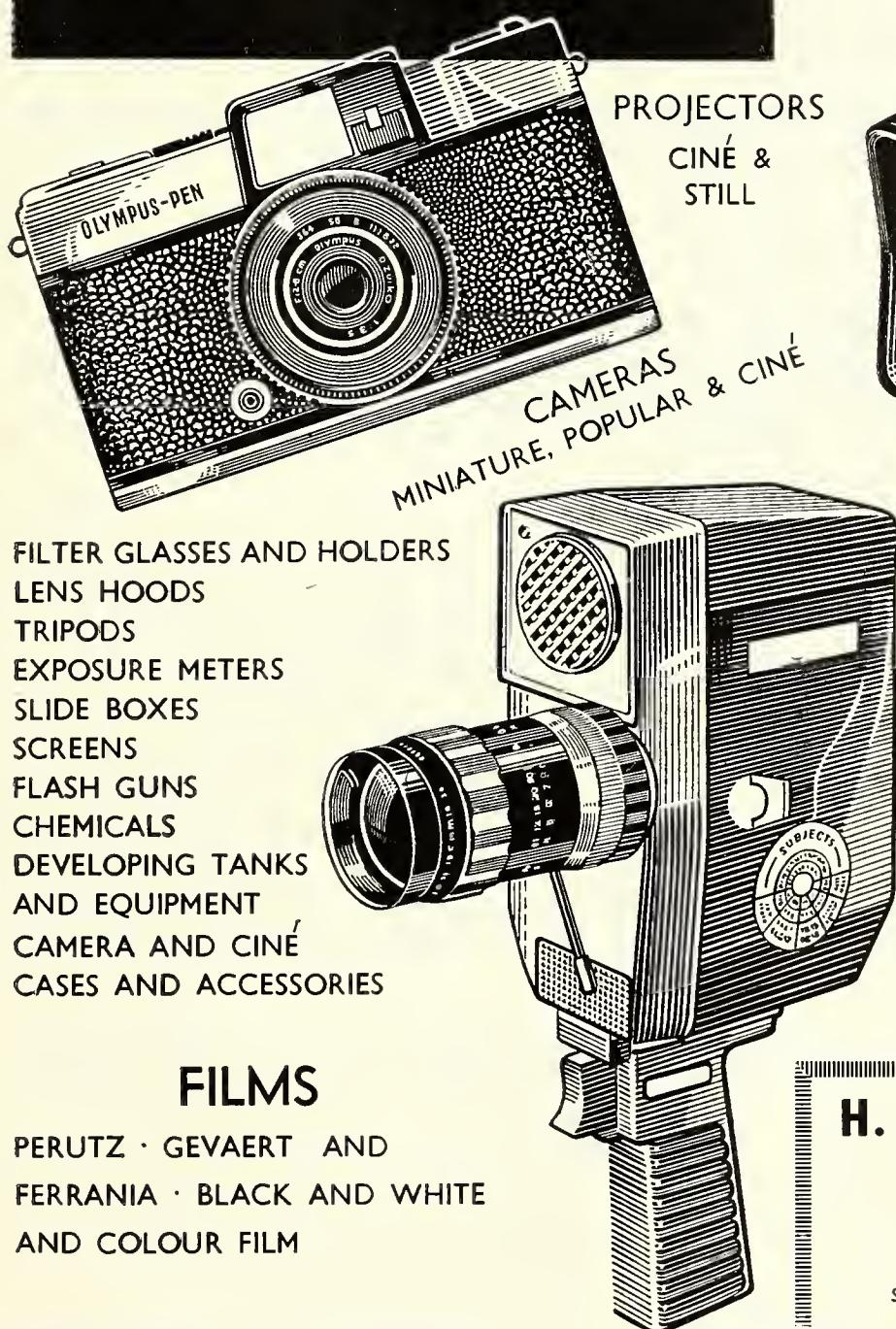
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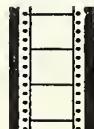
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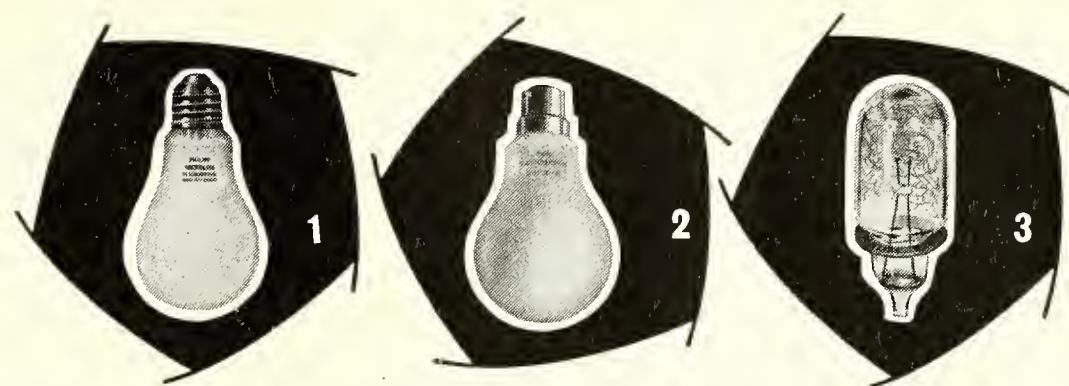
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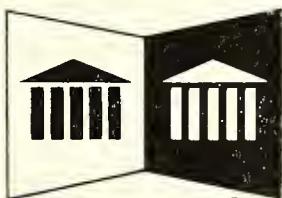
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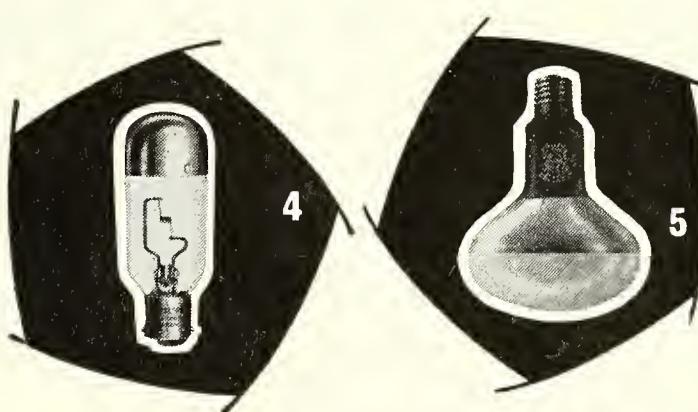


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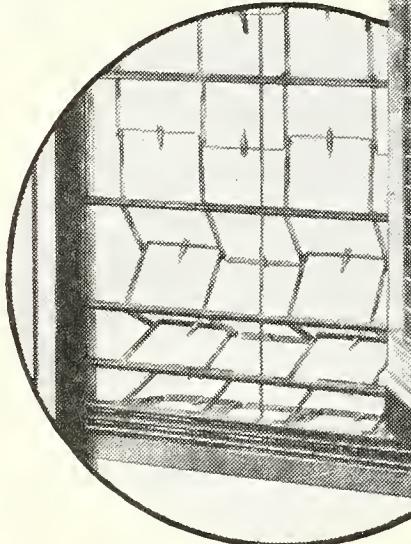
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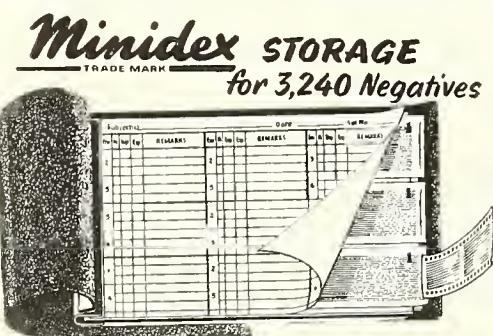
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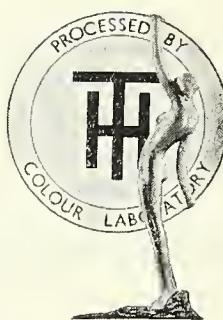
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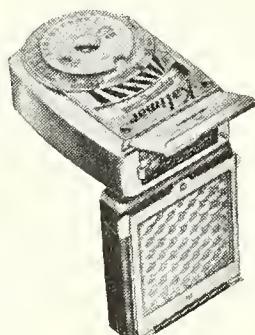
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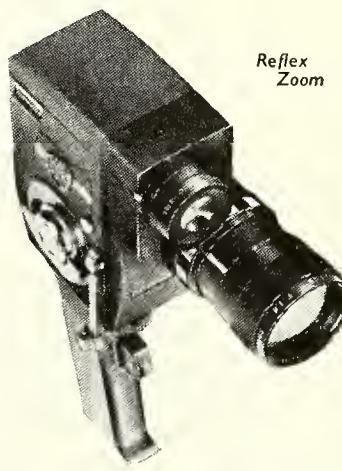
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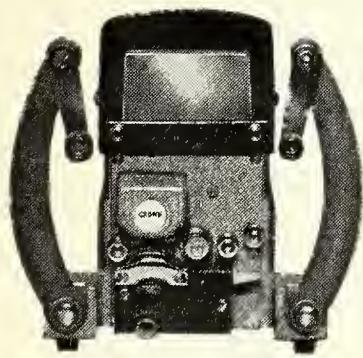
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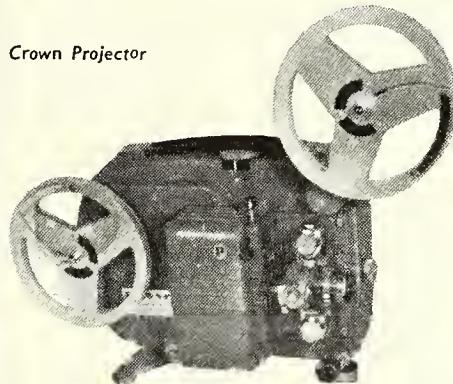
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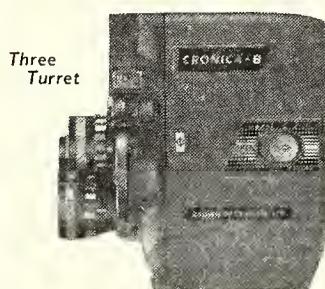
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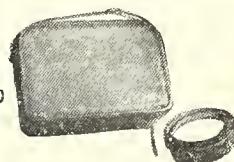
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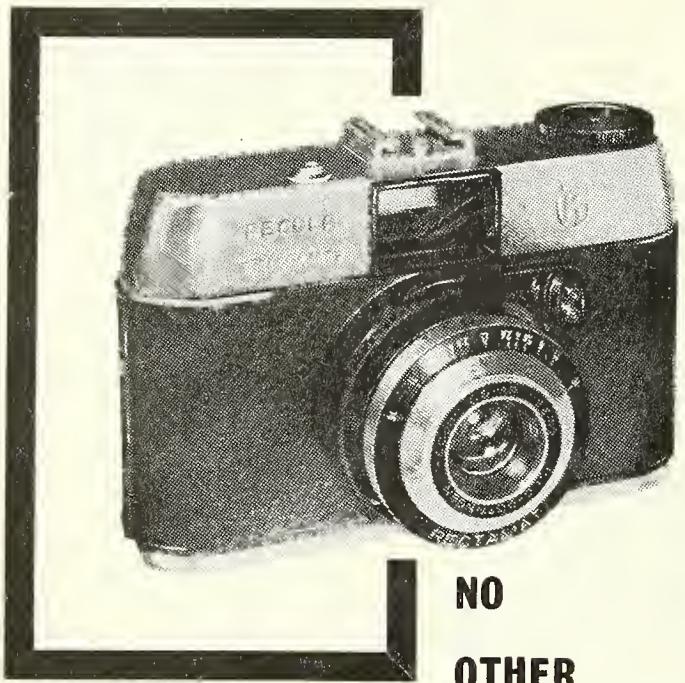
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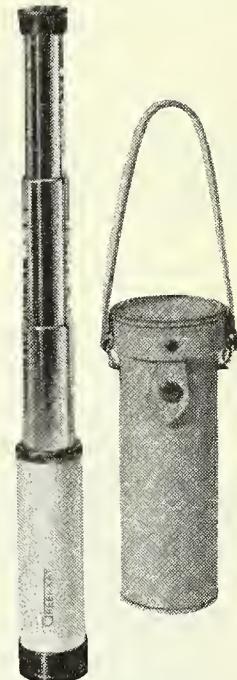
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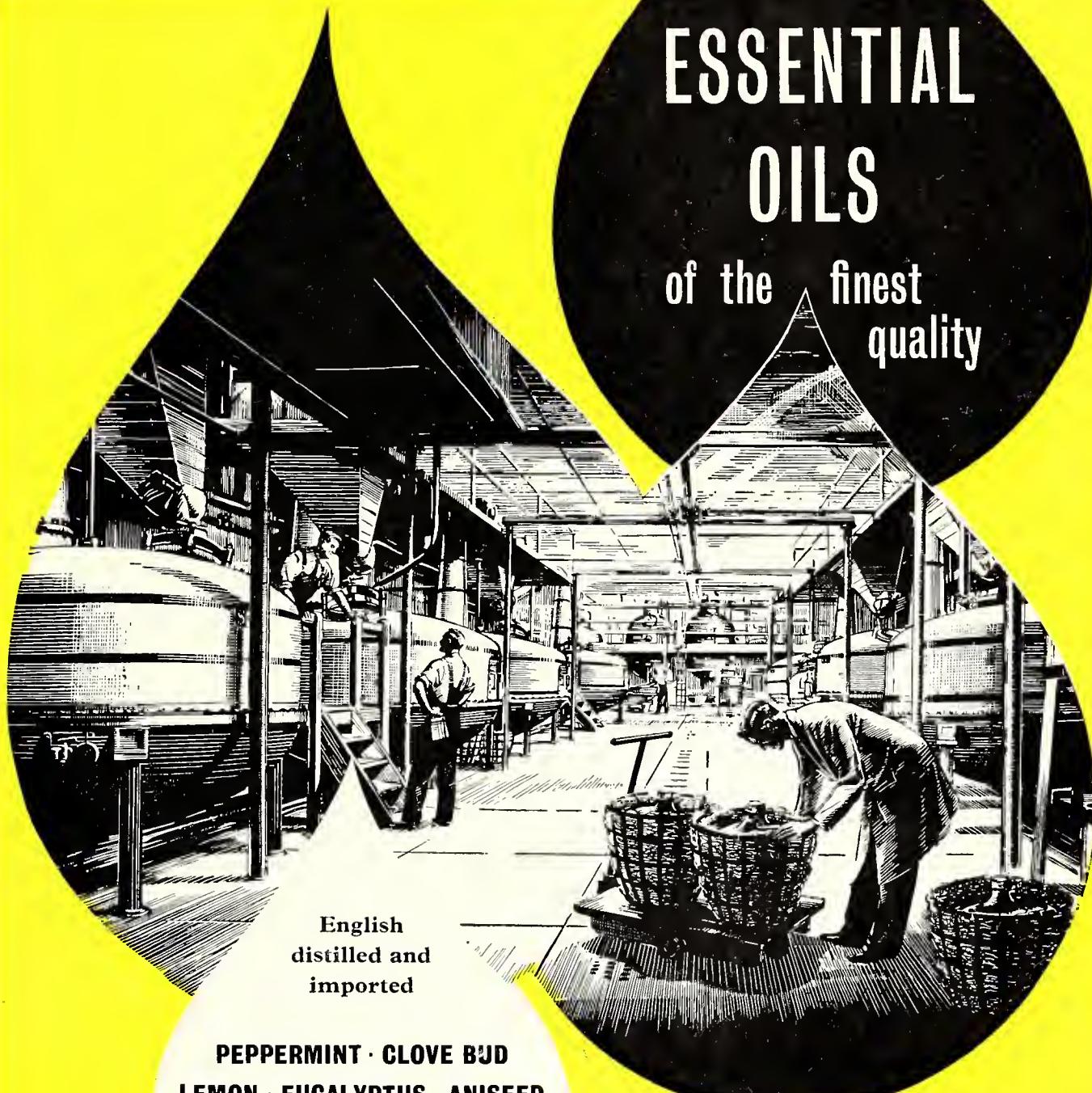
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**SELLS FOR £10.7.0**

**COSTS (After  
Discount) £6.14.6**

**PROFIT £3.12.6 = 35%**

**FOR A LIMITED PERIOD!**

**Available as an  
INDIVIDUAL DIRECT BUY  
at the more advantageous  
60 DOZEN PRICES**



TAMPAX ADVERTISEMENTS, APPEARING RIGHT THROUGH THE YEAR IN ALMOST EVERY MAGAZINE WOMEN READ, WILL PROMOTE THE NEW ECONOMY 40's. MANY ADS WILL FEATURE THEM EXCLUSIVELY!

**A Great Sales and Profit Opportunity... SEE YOUR**

*TAMPAX REPRESENTATIVE WHEN HE CALLS. TAMPAX LIMITED, HAVANT, HANTS.*

# Can We Solve Your . . . D & P Problems?

- Delivering daily in 7 different counties, it is quite possible we pass your door, and we could be delighted to be of service to you.
- To promise quality with speed, a slogan as old as Photofinishing itself, and one which is rarely fulfilled—to give one makes it difficult to provide the other.
- Our three-shift working, however, enables us to give "3 day" quality—"one-day" service.
- Even if you are not in the district of our collection round our "Per Return" postal service will give you a guaranteed delivery time.

## Ektachrome Film

**In one day—out the next!**

Because of our up-to-date reversal processing equipment, we do give a per return service—the quality is guaranteed by control with sensimetric equipment of the highest order.

## Neg-Pos. Printing

Printed on what is virtually the Rolls Royce of colour machinery—American PAKO, we believe our neg.-pos. prints will stand comparison with any Laboratory in Europe.

## Transprints

Processed on the PAKO interneg copier and mounted in eleven different sizes, we produce the best results from what is generally conceded to be a difficult process.

For information and price list  
please write or phone us.

**The NAP** GROUP OF  
COMPANIES

COLOUR  
LABORATORIES

**NAPCOLOR LTD**

22 Grey Street, Manchester, 12  
Telephone: ARDwick 4536 (3 lines)

HEAD OFFICE &  
BLACK & WHITE  
LABORATORIES

**NAP LTD**

Sealand Road, Chester  
Telephone: CHESTER 28121 (3 lines)

**STOCK UP  
WITH**



**NATIONALLY  
ADVERTISED**

**REGENT**

**RETAIL PRICE**  
7 x 50 £10 · 19 · 6  
10 x 50 £11 · 10 · 0  
Leather Case 31/6 extra.

**BINOCULARS**

represent the finest value obtainable today, and nowhere is it possible to buy their equivalent at such a low price—Chance-Pilkington Optical Glass.

**ALSO AVAILABLE**  
8 x 30 £7 · 19 · 6  
16 x 50 £16 · 16 · 0  
12 x 65 £19 · 19 · 0  
(Cases Extra)

Please send me further details:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

**HIGHGATE OPTICAL MANUFACTURING CO., LTD.**  
71/73 Gt. Portland Street, London, W.1 C.D.

## FRAMES FOR COLOUR PRINTS

Modern decor calls for small colour pictures in wood frames; they're seen in groups on the walls in almost every room in the house. Colour photographs are already prolific sellers for this purpose.

Our frame is presented to save your time and space—one colour (white), one price, two sizes

$3\frac{1}{2} \times 3\frac{1}{2}$  and  $3\frac{1}{2} \times 5$ , hang or stand either upright or oblong, each packed in hand-out carton.

Send for illustrated pamphlet or, better still, order a few now.

**4/6**

Retail Price  
Free Showcard

## PRINT WALLETS

We have perhaps the widest range of standard designs of D & P wallets in the world. Every chemist should display his name on a container which is carried in the pocket—there can be no finer advertisement.

**SEND FOR SAMPLES**

C. H. HALLIDAY & CO., LTD. HOLBECK LANE, LEEDS 11

# MASSIVE to back your photo-sales throughout the season KODAK ADVERTISING

**1**

## NEW INSTAMATIC CAMERAS

**PRESS**

Big, powerful advertisements in these national papers, starting mid-May:

**DAILY EXPRESS · DAILY MAIL · DAILY TELEGRAPH**  
**DAILY MIRROR · SUNDAY EXPRESS**

**I.T.V**

Striking 'see-how-it's-done' 60-sec. and 30-sec.  
peak-period commercials, from mid-May.

**2**

## OTHER KODAK CAMERAS AND COLOUR FILMS

**PRESS**

Eye-catching advertisements in the following national papers:

**DAILY EXPRESS · DAILY MAIL · DAILY MIRROR**  
**DAILY TELEGRAPH · DAILY HERALD**

*Plus — exciting full-colour advertisements — details later.*

**I.T.V**

Compelling TV commercials will boost  
'Kodacolor' film sales this summer.

**3**

## MOVIE CAMERAS AND FILM

**PRESS**

Electric 8 Automatic Camera, 'Package Movies' Offer, 'Kodachrome' II  
film — Kodak's 3-prong movie campaign will be divided between these  
national papers:

**SUNDAY EXPRESS · SUNDAY PICTORIAL · OBSERVER**  
**DAILY MAIL · DAILY TELEGRAPH · DAILY EXPRESS**  
**NEWS OF THE WORLD · SUNDAY TELEGRAPH**

**Kodak**

**Kodak Limited London**



### "Eagle" Brand Chemicals

#### PHOTOGRAPHIC CHEMICALS

SODIUM METABISULPHITE

SODIUM HYPOSULPHITE  
(Crystals and Anhydrous)

SODIUM SULPHITE  
(Crystals and Anhydrous)

EPSOM SALTS B.P.

GLAUBER SALTS B.P.

SULPHUR (Ground and Unground)

ACCUMULATOR ACID

Enquiries Invited

**WILLIAM BLYTHE & CO., LTD.**

HOLLAND BANK CHEMICAL WORKS, CHURCH  
LANCASHIRE

Tel: 32141/3 ACCRINGTON

Grams: BLYCO, ACCRINGTON

## COLOUR PROCESSING

in

IRELAND

send your

KODACOLOR

AGFACOLOR

ILFOCOLOR

GEVACOLOR

films to

**LYALL SMITH LABORATORIES LIMITED**

Rathgar, Dublin 6

Official Agfacolor Processing Station in Ireland

**PHOTO STUDIO**

### PHOTOGRAPHIC ACCESSORIES



#### DISH WARMERS

Thermostatically  
controlled

11½ x 9	— £2. 10. 9.
15 x 9	— £3. 3. 6.
18 x 10	— £4. 2. 6.
24 x 15	— £6. 9. 9.



#### PRINT DRYERS

Single sided

11 x 9 — £2. 10. 9.

14 x 10 — £3. 5. 6.

20 x 15 — £6. 9. 9.

#### PRINT DRYERS

Double sided

14 x 10	— £4. 6. 3.
20 x 15	— £8. 15. 0.

Thermostatically  
controlled

Double sided	14 x 10 — £6. 12. 0
--------------	---------------------

#### LIGHTING UNITS

Cine 2 and 4 arm Bar Lights. Chrome flexible  
arms. Dim—bright switch. E.S.  
2 arm — £3. 2. 3. 4 arm — £4. 2. 7.



STUDIO LIGHTING. Pressman Beam  
Master, Reflectors, Lenses, Tripods, etc.

Full range of Photo Accessories  
obtainable through:—

**H. B. DORLING LTD.,**

Selinas Lane, Dagenham, Essex

(PHOTOGRAPHIC  
DIVISION)

**Noris**

### NORIS CINE AND SLIDE PROJECTORS

*The finest value on the market*

#### CINE PROJECTORS

##### NORIS SUPER 100

With 20 mm PLANKAR  
lens, 12 volt/100 watt  
lamp. Cable release built-in  
editor. Price, including  
lamp, 43 gns.

##### NORIS SYNCHRONER 100

As Super 100 but with  
built-in Syncromat. Price,  
including lamp, 49 gns.

#### SLIDE PROJECTORS

##### NORIMAT Semi-Automatic Control PROJECTOR.

With F/2.8 KATAGON 85 mm lens.  
Retail price, without lamp,  
18 gns.

##### NORIMATIC 500

With F/2.8, 85 mm KATAGON  
lens. Retail price, with one  
magazine, 45 gns., lamp  
extra.

NORIS AIRLUXE 500, modern design, blower cooled. Retail  
price, complete with case £25. 10. 0, lamp extra.

NORIS 150A, F/2.8, 85 mm KATAGON lens. Retail price,  
complete with case, 15 gns., lamp extra.

NORIS AIRFLOW 300 BLOWER COOLED PROJECTOR with  
F/2.8 KATAGON Anastigmatic lens. Retail price, without lamp,  
22 gns.

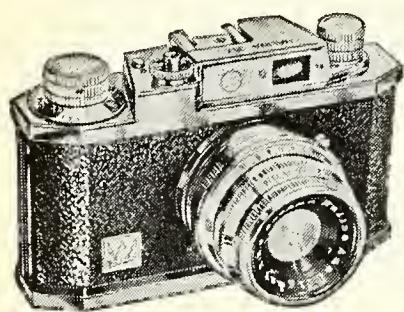
NORIS 66 ASPHERIC PROJECTOR with f/3.5 ENNAR fully  
corrected lens. Retail price, without lamp, 20 gns.

NORIS AIRFLOW 66 BLOWER COOLED PROJECTOR with  
F/3.5 ENNAR 150 mm lens. Retail price, without lamp, £33.

Sole Distributors in the U.K.

LUMINOS LTD., 1 Belsize Crescent, Hampstead, London, N.W.3





### Halina 35X

- ★ All metal precision 35 mm.
- ★ f/3.5/45 mm. colour corrected lens.
- ★ Synchronised shutter up to 1/200th sec.

★ Coupled film Transport and exposure counter.  
**IDEAL FOR BLACK/WHITE COLOUR**

Ever Ready case £1/8/1    **£7-13-3**



### Halina

#### 35 mm. TABLE VIEWER

- ★ The extra large, precision ground twin optically polished lenses are made from the world-famous Chance Pilkington Optical Glass giving perfect enlargements
- ★ Lenses can be taken out for cleaning purposes.

This viewer can now be converted into a mains operated viewer by adding the AMBASSADOR MAINS BASE 19/9 extra

**NOW ONLY**  
**32/6**    Batteries 10d extra



### Halina A1

- ★ TWO CAMERAS IN ONE
- ★ All metal.
- ★ 2½ x 2½ and 35 mm. on 120 film.
- ★ f/3.5/80 mm. colour corrected lens.
- ★ Synchronised shutter speeded up to 1/100th sec.
- ★ Coupled front lens focusing.

**£7-19-6**

Leather Ever Ready case £1/19/6

### Halina EQUIPMENT *For a speedy turnover*



### Halina PET

BEST VALUE IN 35 mm.  
CAMERAS

- ★ Three apertures 8-11-16.
- ★ Bulb and instantaneous shutter.
- ★ ALL METAL with satin chrome/leatherette finish.
- ★ Synchronised for flash.
- ★ Double exposure prevention.

Ever Ready Case £1/8/1    **£4-19-6**



### Halina VICEROY

- ★ TWO CAMERAS IN ONE
- ★ All metal.
- ★ 2½ x 2½ and 35 mm. on 120 film.
- ★ Double meniscus f/8 lens.
- ★ Actual size ground glass reflex view-finder.

★ Synchronised for flash.

Ever Ready Case 18/-

**£3-19-6**

### Halina 150 2" x 2" STILL PROJECTOR

- ★ f/3.5/80 mm. hard-coated colour corrected lens.
- ★ Double condensers.
- ★ All metal.
- ★ Accepts all 2" x 2" slides.

Can be converted to 300 watt projector in a few minutes by fitting the HALINA all-metal Fanbase £5/5/0

**£8-19-6**

150 watt lamp 21/9.    Carrying case 25/-

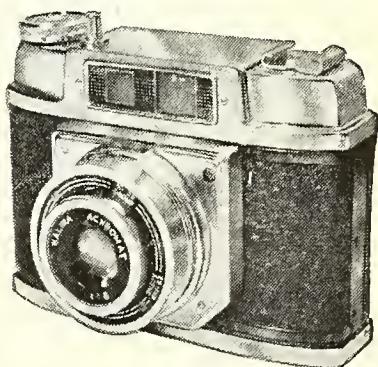


FOR ALL  
TYPES OF  
35 mm.  
SLIDES

### Halina 6-4

#### TWO-IN-ONE CAMERA 2½ x 2½" or 1½ x 1½"

- ★ ALL METAL.
- ★ Achromatic lens f/8.
- ★ Front lens focusing.
- ★ Apertures 8-11-16.
- ★ Double exposure prevention.
- ★ Synchronised for flash (bulbs).



**£3-19-6**

Ever Ready Case £1/9/11 detachable back



J. J. SILBER LTD., 11 Northburgh Street, London, E.C.1    Telephone: CLErkenwell 8031 (10 lines)

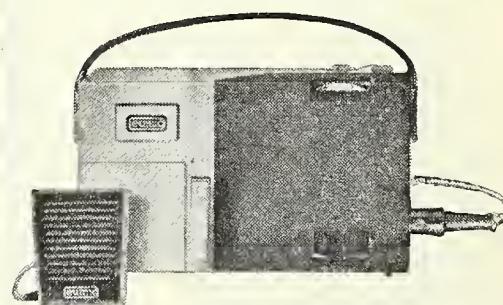


**8mm  
AUTOMATIC  
CINE CAMERA**

- ★ **FULLY AUTOMATIC EXPOSURE CONTROL**
- ★ **NO FOCUSING**
- ★ **ELECTRIC DRIVE - NO WINDING REQUIRED**

Here is the beginner's dream—and the expert's ideal 'second camera.' Without stopping to focus, adjust the stop or wind the camera up anyone can produce crisp, bright and perfectly exposed movies by just aiming and pressing a button. The aperture adjusts itself immediately to the slightest change in light conditions—even while you are shooting. The four 1.5v batteries will run 10 spools of film. With EUMIGON f1.8/12.5mm lens.

**£27.18.0.**



**SOUND AS WELL!**

There is a socket on the S2 into which you can plug the EUMIG T5 Tape Recorder. When you press the camera release image and sound are simultaneously recorded. Weighing only 2 lbs. and measuring only  $6\frac{3}{4} \times 4 \times 1\frac{1}{8}$  ins., the T5 will record 20 minutes of sound on one reversible magazine. T5 with magazine and batteries

**£25.10.0.**

**JOHNSONS**  
OF HENDON LTD

*The finest cine value  
in the world*



FIG. 1  
STRUCTURE  
OF THE  
NEGATIVE

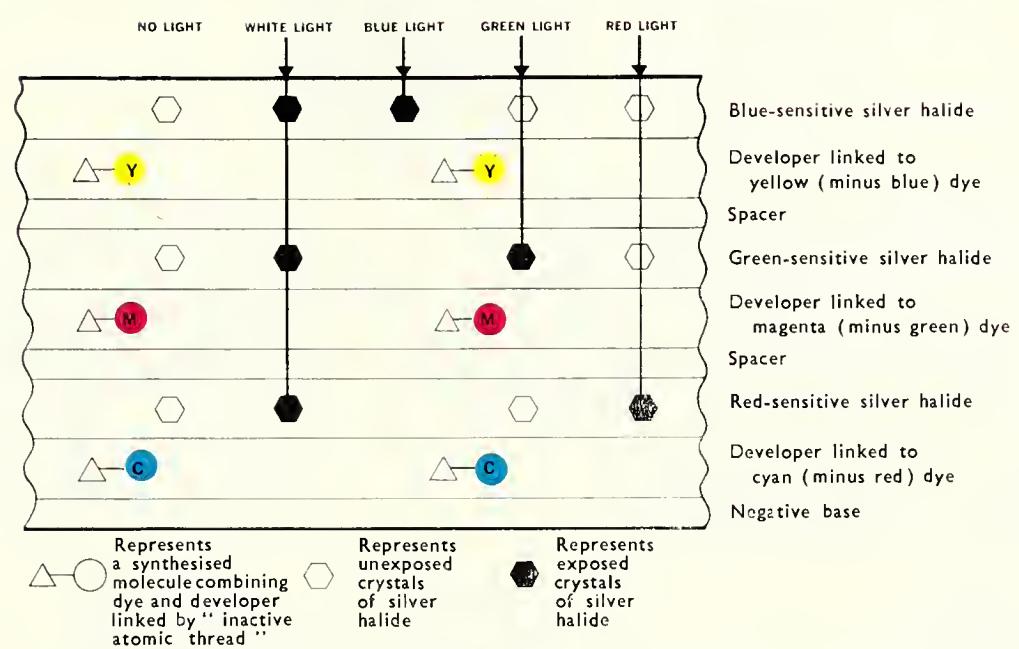


FIG. 2  
WHAT HAPPENS  
IN THE  
NEGATIVE  
DURING  
PROCESSING

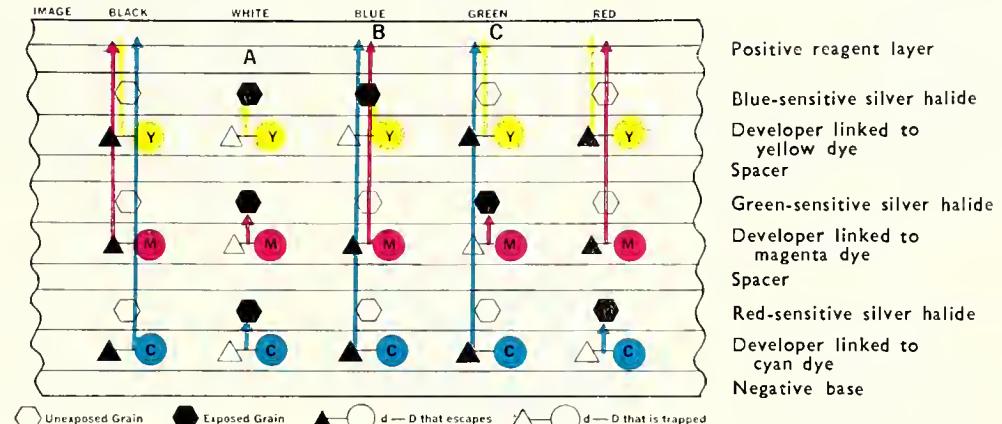
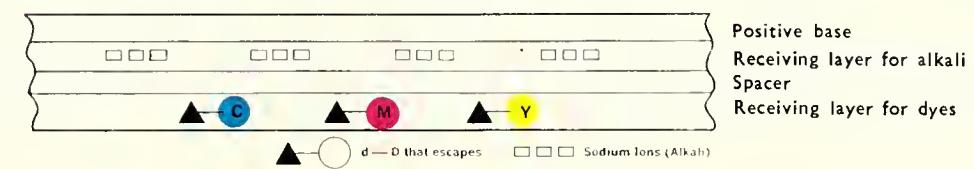


FIG. 3  
WHAT HAPPENS  
IN THE  
POSITIVE  
DURING  
PROCESSING



▲  
EXAMPLES  
OF  
POLAROID  
COLOUR

# NEWS

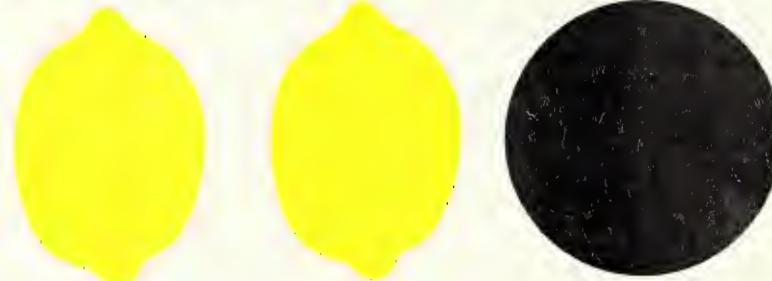
FROM  
**GIBBS PEPSODENT**

## A NEW LEMON PERFUMED RINSE FOR TWINK!



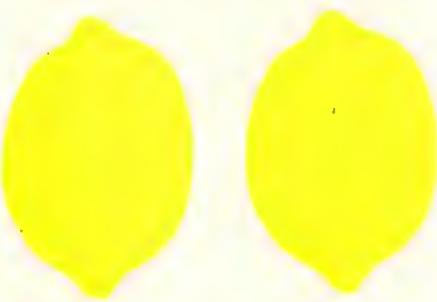
Now, with every packet of Twink home perm, this sachet of a delicious new lemon perfumed rinse—specially made to pour over wound curls so they dry with a lemony fragrance.

## ALSO NEW PRICE CHANGES!



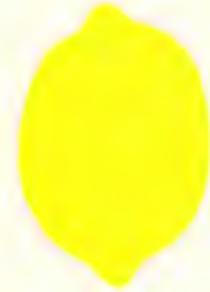
All sizes of Twink with the new lemon perfume sachet are going up 6d. in price. This means that *until APRIL 19th* you'll be able to buy in stocks at the old trade prices and sell out at the *new* retail prices.

## SO HURRY AND TAKE ADVANTAGE OF THIS OFFER!



## AND TO LAUNCH THE LEMON

A full-page colour and black-and-white campaign in three mass-circulation Women's Magazines—Woman, Woman's Own, Woman's Realm—beginning in APRIL.



## ALL WORKING JUST FOR YOU!

Because, remember, two-thirds of all women all over the country will read these advertisements many times between April and the end of December.

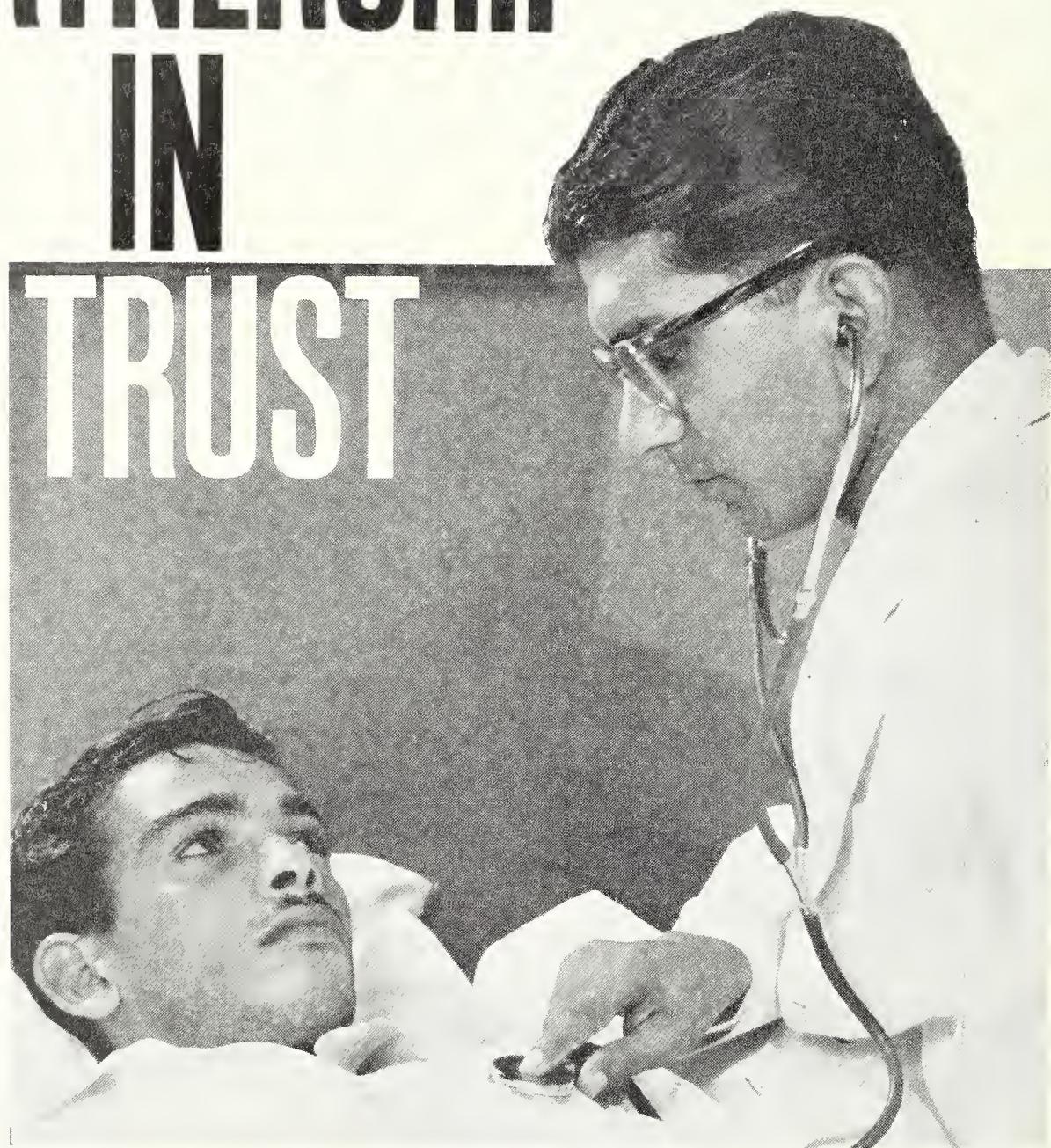


**THE TWINK LEMON SACHET MEANS  
EXTRA SALES—BE SURE  
TO HAVE PLENTY IN STOCK**



GROWTH THROUGH PARTNERSHIP

# PARTNERSHIP IN TRUST



Every successful partnership is founded upon trust. We at Ferozsons have partners in many countries throughout the world, amongst whom are doctors, chemists, pharmacists, radiologists, sociologists . . . We couldn't get far without one another's specialist help. But we couldn't even begin without mutual trust. It's due to this trust and understanding, that doctors and all our other partners, have learnt to trust Ferozsons and the pharmaceuticals we make.



**FEROZSONS LABORATORIES LIMITED,**

Nowshera, Pakistan. Cables: Ferozsons Nowshera

# CAREFUL COLOUR PROCESSING AND PRINTING

- Agfacolor, Ektachrome, Ferraniacolor, Gevacolor, Ilfocolor, Kodacolor — we individually process all kinds of film (except process-paid).
- The newest processing and printing apparatus operated by trained technicians with years of experience.
- Giving you careful, first-class work all the time.
- Speedy delivery—on average, reversal films 24 hours, negative films 48-72 hours.
- Backed by efficient courteous service.
- Years of good work for leading photo-dealers.

## INVITATION

Ring or write to Mr. Reece himself for full information.

# Fencolor

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## LABORATORY

BOX 47, CAMBRIDGE  
TELEPHONE 54507

MEMBER OF THE REECE GROUP  
**R**  
A MEMBER OF THE REECE GROUP

MILLIONS  
OF WOMEN  
are reading...



Millions of women put their confidence in Mene. The sales figures prove it. Mene is the super luxurious, extra absorbent sanitary towel that's so comfortably soft. Women tell each other about Mene reliability and superb quality, and advertisements in the mass circulation women's magazines will repeat the story, time and time again, to potential Mene users everywhere. Put your confidence in Mene too. Stock, display and sell Mene!

## \*SPECIAL DISCOUNTS FOR YOU

*You may obtain a special discount of from 5% to 10% on your order for Mene. Ask for details — now.*

ROBINSON & SONS LTD., WHEAT BRIDGE MILLS, CHESTERFIELD

# ORBENIN

— the only oral penicillin in the U.K. effective against resistant staphylococci, now available as

# SYRUP



Beecham Research Laboratories Limited are pleased to announce the introduction of Orbenin Syrup. Bactericidal to resistant staphylococci and other Gram-positive organisms, this preparation will prove extremely valuable to the very young, elderly and other patients for whom a liquid preparation is to be preferred to capsules.

Orbenin Syrup is supplied as a powder for preparing 60 ml. of pleasantly flavoured syrup. When dispensed each 5 ml. contains 125 mg. cloxacillin (as sodium salt).

*Pack 60 ml. bottle*

*Retail 20/3*

*Trade (basic N.H.S.) 17/6*

Orbenin is also available as Capsules (250 mg.) and Injection (250 mg. vial)



Orbenin (Sodium cloxacillin) is a product of British research at

**BEECHAM RESEARCH LABORATORIES LIMITED**  
Brentford, England. Telephone ISLeworth 4111.

# DUPLIFILM

Perfect copies  
from 8 mm or  
16 mm film

**CONTACT · REDUCTION  
OR BLOW-UPS**

Here is something never before available to the general public... a comprehensive conversion service providing perfect prints from 8 mm or 16 mm film graded and colour corrected, in any quantity, quickly and economically.

FILMPrint SERVICES LTD., equipped with the most modern apparatus, some of it unique in this country, place their facilities at your disposal. We offer expert co-operation in giving your customers an unrivalled film copying service.

*Get in touch with us right away for full details and prices.*

**Offer  
this NEW  
service to  
your customers  
FOR BIGGER  
BUSINESS!**



**FILMPrint  
SERVICES  
LIMITED**

*Specialists in 8 mm conversion*

**71/72 GROSVENOR STREET · LONDON W1 · MAY 2456**

The growing demand in the 8 mm field offers you the opportunity of a substantial expansion in turnover for your film printing department.

*Trade discount 33 $\frac{1}{3}\%$*

*Attractive showcards and price lists available... write for details.*

# Ciech

[Poland]

offers the following  
**PHARMACEUTICAL PRODUCTS**

**ANTIBIOTICS**  
**SULPHONAMIDES**  
**SALICYLATES**  
**BISMUTH SALTS**  
**ALKALOIDS**  
**PREDNISONE**  
**AMINOPHENAZONE**  
**PHENACETIN**  
**INSULIN**

Samples, pamphlets and detailed  
offers available on request

## CIECH

Import and Export of Chemicals Ltd.,  
1, 12, Jasna Street, Warszawa,  
Poland  
P.O.B.271 Cables: CIECH WARSZAWA

Full particulars from our Agents:  
Anglo-Dal Ltd., Chesterfield House,  
Bloomsbury Way, London W.C.1  
Cables: Anglo-Dal, London  
Phone: HOLBORN 4366

*We invite you to visit our stand at the*  
**XXXII<sup>nd</sup> POZNAN INTERNATIONAL FAIR, 9 - 23 June, 1963**  
POZNAN — Fair of 5 Continents!

**Miss Beatson**

**RELIEVES  
THE CHEMIST'S  
"HEADACHE"**



**... when  
it comes to  
MEDICAL BOTTLES**

Beatson's two centuries of service to the trade means that they can satisfy the exacting requirements for bottles of all types used in Pharmacy. You can rely on Beatson's uniform high quality—their reasonable prices—and their delivery promises. Almost every type and size you need can be delivered from stock... delivered production-clean, ready for immediate use.

# BEATSON

*Bottles for  
busy chemists*

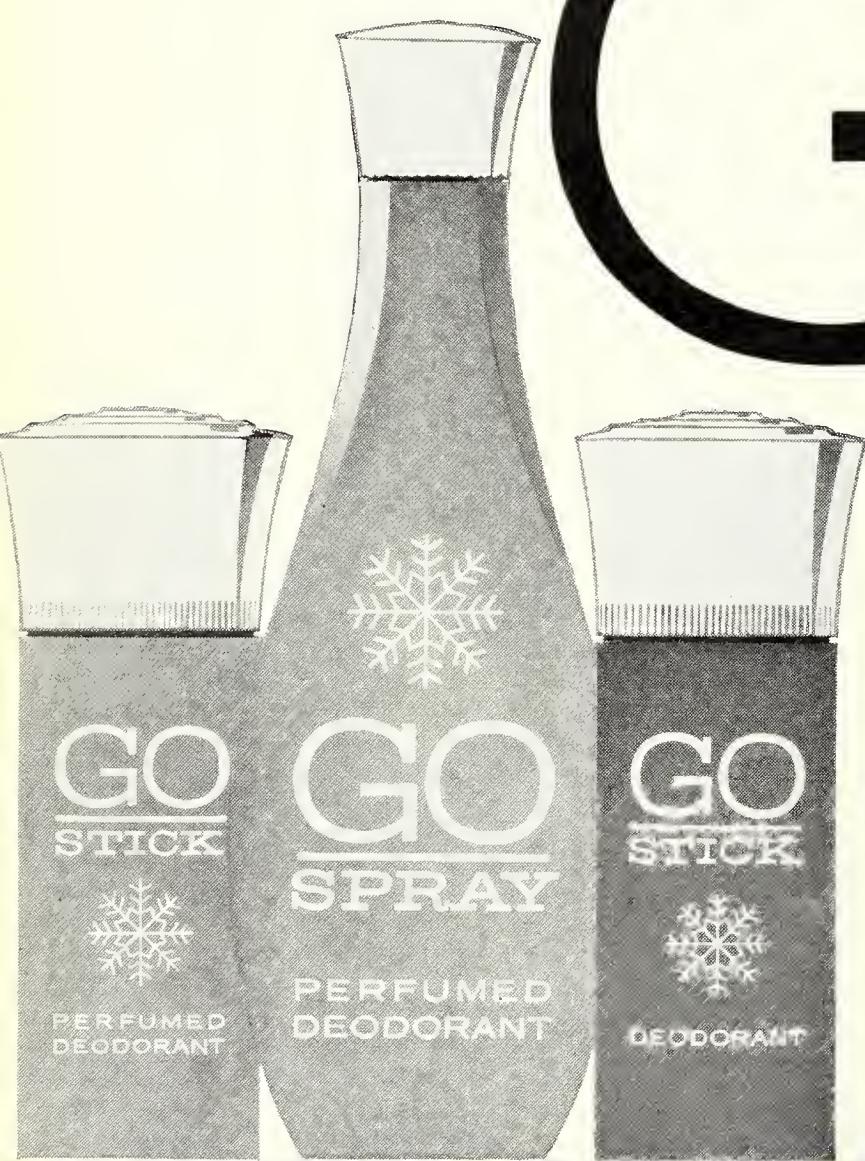
BEATSON, CLARK & CO. LTD ROTHERHAM YORKS. Tel: 3188. Glass Bottle Manufacturers since 1751

MB 10

# GO-AHEAD

This summer see Sales  
go-ahead with go-ahead

# GO



BRITAIN'S LATEST  
PERFUMED  
DEODORANT  
—now in these  
appealing spray  
and stick packs.

## GO-AHEAD NOW—

Make sure you're well stocked with GO...the deodorant you'll sell, sell, to every go-ahead girl among your customers. Ask our representative for the Special Bonus terms!

# SALES

## Go-ahead Advertising too

Eight showings in the Daily Mirror!  
Whole page ads in Woman, Woman's Own,  
Woman's Mirror, Woman's Realm!  
A total readership that reaches almost  
every woman in the country.

ARE YOU A GO-AHEAD GIRL?



Go in for go-ahead

GO

LATEST PERFUMED DEODORANT  
THAT MATCHES UP TO THE LIFE YOU LEAD



DEODORANT  
PERFUMED SPRAY 250G  
PERFUMED STICK 75G  
STANDARD UNSCENTED STICK 152G

Are you a go-ahead girl?



go in for  
go-ahead  
GO

LATEST PERFUMED  
DEODORANT THAT  
MATCHES UP TO  
THE LIFE YOU LEAD



# GALENICALS

## for WINTER DISPENSING



*Manufactured under strict  
supervision from finest  
quality ingredients.*

**RICHARD DANIEL & SON LTD.**  
MANUFACTURING CHEMISTS

**MANSFIELD ROAD DERBY.** TEL.: 40671 (10 lines)

And at GROSVENOR ST., ASHTON-u-LYNE. Tel.: 5161 (9 lines)  
NORTH WINGFIELD ROAD, GRASSMOOR. TEL. HOLMEWOOD 481 (5 lines)

## "RELIANCE" NATURAL SPONGES



### Natural Deep Sea Sponges

To display a natural deep sea sponge is to sell it—because discriminating customers know that it is softer and kinder to the skin, and more lasting and more hygienic than any substitute—as well as holding three times as much water.

Cresswell's offer the best of the sponge crop. Please write for our price lists, and when in the West End of London a visit to make your own selection is welcomed.

**CRESSWELL BROS. SPONGES**

3-9, EARLHAM STREET, CAMBRIDGE CIRCUS, LONDON, W.C.2  
TELEPHONE TEMple Bar 5331



### GRANOSE ROLLS ARE STARCH REDUCED.

Crisp, crunchy and appetising, Granose Rolls are much higher in protein and lower in starch than ordinary bread. Apart from their dietetic value Granose Rolls will be enjoyed by the whole family. They're delicious!

Handy Pack . . . . . 1/6  
Standard Pack . . . . . 2/9

GRANOSE FOODS LTD. WATFORD. HERTS.

# IMPORTANT --- **ANNOUNCEMENT**

★ ★ ★

LASTONET PRODUCTS LTD. ARE CARRYING OUT AN ALL POWERFUL PROMOTION ON LONDON UNDER-GROUND USING POSTERS AND CAR PANELS. THIS CAMPAIGN WILL MOVE . . .

**LASTONET SURGICAL HOSIERY**  
**LASTORINSE**  
**LASTONET FOOT POWDER**  
**LASTONET FOOT SPRAY**  
**LASTONET CREAM**

... REALLY FAST OFF YOUR SHELVES.  
MAKE A NOTE TO STOCK AND  
DISPLAY ALL THESE LASTONET  
PRODUCTS FROM APRIL 1st ON-  
WARDS.

★ ★ ★

# EASTER! FUN & GAMES START!

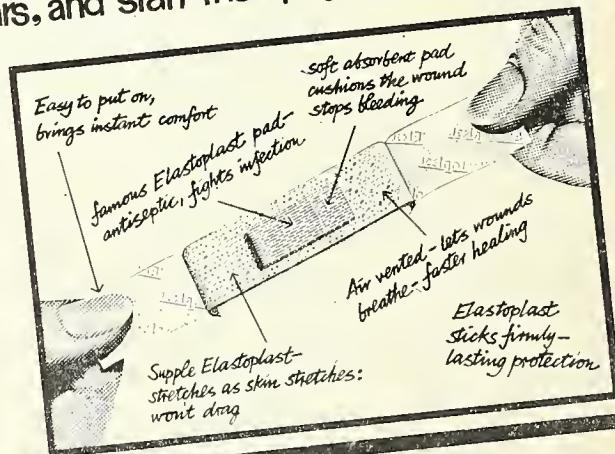


**You need Elastoplast** to mend the cuts and blisters and grazes, to hush the sobs and dry the tears, and start their play all over again

The whole family is looking forward to a smashing time this Easter! Out and about you'll have plenty of fun. And a few minor cuts and bangs and scrapes and scratches, too! So take some Elastoplast with you. See (on the right) how Elastoplast has everything for making hurt places feel better. Wonderful Elastoplast! Get some today.

Make up your mind right now — go and get some Elastoplast today. *It's important that you do*

**Elastoplast**



**13 MILLION READERS  
WILL SEE THIS WHOLE  
PAGE ADVERTISEMENT  
IN THE**

**DAILY EXPRESS**

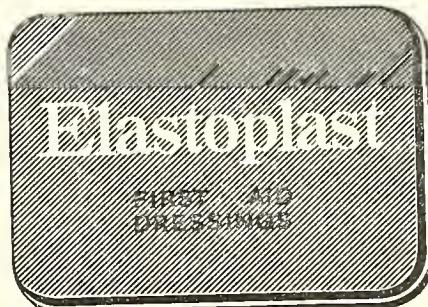
**ON  
9th APRIL**



**BIG NEW  
ELASTOPLAST ADVERTISING  
BEGINS WITH A BANG!**

Big spaces in the Daily Express will be appearing regularly to remind mothers everywhere that this is the season of cuts and scratches. For holiday time is here. The children are home, full of life and having a rare old time outdoors. Which means a big demand for Elastoplast. And every mother knows it! So get ready for a big boom in Elastoplast sales. Keep Elastoplast on display throughout this campaign and get your share of the increased business that is coming.

**Elastoplast**



If you sell hair lacquer you'll sell REM-LAC lacquer-removing shampoo again and again

Already a success with hairdressers, Rem-lac lacquer-removing shampoo will make an immediate appeal to any woman who uses lacquer on her hair. Ordinary shampoos can't touch the lacquer, which left in, dries and dulls the hair. A special ingredient in REM-LAC gently floats out every trace of it. This way the hair is not only as clean as any good shampoo can make it. It is really soft and supple again, ready to take a beautiful set.

*STRONG LAUNCHING CAMPAIGN OPENS MARCH with advertisements in WOMAN WOMAN'S OWN HONEY TRUE ROMANCES TRUE STORY BOYFRIEND MIRABELLE/MARTY MARILYN VALENTINE ROXY TEEN—and more advertising to follow.*

ORDER NOW FROM  
YOUR WHOLESALER  
EYECATCHING  
NEW BOTTLE  
RETAILS AT 2/6  
FOR 3-4  
SHAMPOOS

Whitecroft (Lydny) Ltd,  
Whitecroft, Lydney, Glos.



**BRAND NEW  
STEEL  
SHELVING  
HEAVY GAUGE**

FREE delivery within 14 days. N. Scotland, Ireland, I.O.M. 10% extra

71" high x 34" wide, 12" deep with 6 shelves as illustrated. C.W.O. or C.O.D.

**60/-**

Each shelf will hold over 3 cwt. Shelves adjustable every 2". Stove enamelled dark green. White enamel units 50% extra.

Height	Width	Depth	No. of Shelves	Price	Price each 3 or more	Extra Shelves
71"	34"	9"	6	58/-	56/-	7/-
71"	34"	12"	6	60/-	58/-	8/-
71"	34"	15"	6	69/-	67/-	9/6
85"	34"	12"	6	68/-	66/-	8/-
85"	42"	12"	6	86/-	84/-	11/-

**HANDY DRAWER UNIT  
BRAND NEW**

42" high, 13" wide, 12" deep. 20 DRAWERS: 5" wide, 3" high, 11 1/2" long. Stove enamelled dark green. Direct from manufacturers. Write now for list of other sizes.

**£7.15.0**

Buy direct from the manufacturers.  
**ROCHDALE METAL PRODUCTS**  
Dept. C.D., Shawclough Works, Waterfoot,  
Rossendale, Lancs. ROSSendale 2450  
Contractors to H.M. Government and United  
Kingdom Atomic Energy Authority  
EXPORTERS OF STEEL SHELVING

Do not  
disappoint  
your customers  
—stock and display

**askit**

Powders and tablets for the safe and  
speedy relief of headaches, colds, chills,  
rheumatic and nerve pains.

EX ALL LEADING WHOLESALE HOUSES

# BIG ADVERTISING

Year-round in every issue  
of Britain's leading  
family magazines

MY HOME · HOME · HOUSEWIFE · EVERYWOMAN  
WOMAN & HOME · MOTHER & BABY · PARENTS · MOTHER

# BIG PROFITS

**SURE SHIELD Laxatives**  
THE FRUIT FLAVOURED

**SURE SHIELD LAXATIVES**

WITH THE  
*Raspberry Flavour*

The taste of natural raspberry juice... then gentle, effective relief... the family laxative that's so easy to take.

**IDEAL FOR CHILDREN**

Family size: 2/6      Personal pack: 1/3½

UP TO  
**56%**  
PROFIT ON COST  
ON BONUS TERMS

See your representative, or write to:  
THOS. GUEST & CO. LTD.  
92 CARRUTHERS STREET  
ANCOATS · MANCHESTER 4

**SURE SHIELD**

**PIONEERS**  
in unit packaging

**SPECIALISTS**  
in strip packaging

**The Wallis Laboratory Ltd.**

HOLYWELL ESTATE · WATFORD · HERTS

Telephone WATFORD 21812

• • • • •  
at prices  
to meet present day competitive needs!

all tablets, pills, capsules, on the B.N.F. list!



**Export Inquiries Invited**

**Inquiries Welcomed for  
OWN NAME packs**

## NUCTA EGG AND LEMON SHAMPOO

**IN THE EVER POPULAR**

**1/- TUB**

**SUFFICIENT FOR TWO OR THREE SHAMPOOS**

**6/8 per dozen (plus tax)**

**ALSO AVAILABLE IN THE  
FAMILIAR JARS TO SELL  
AT 2/8 AND IN THE 3/11  
FAMILY SIZE TUBE.**

*From your wholesaler or direct*



**STEWART, GOODALL & DUNLOP LTD. 121a PRINCES STREET, EDINBURGH**

# CANNON TEATS

nearest  
to  
natural  
feeding



## THIS IS WHY

- Triple perforation for even, air-free flow
- Spiral reinforcement prevents softening or collapse
- Fewer new ones to break in because Cannon teats last longer

As from January 1st, 1963, Retail Price is 9d. each and Trade Price 6/- per dozen.

# CANNON TEATS

THE CANNON RUBBER MANUFACTURERS LTD  
ASHLEY ROAD • TOTTENHAM • LONDON N.17

**BOVRIL LIMITED**  
and  
**MARMITE LIMITED**

**announce**  
**the integration of**  
**the two companies**

**with effect from 1st April, 1963**

*The operating company will be*

**BOVRIL LTD**

148 - 166 OLD STREET · LONDON E.C.1.

*Branches*

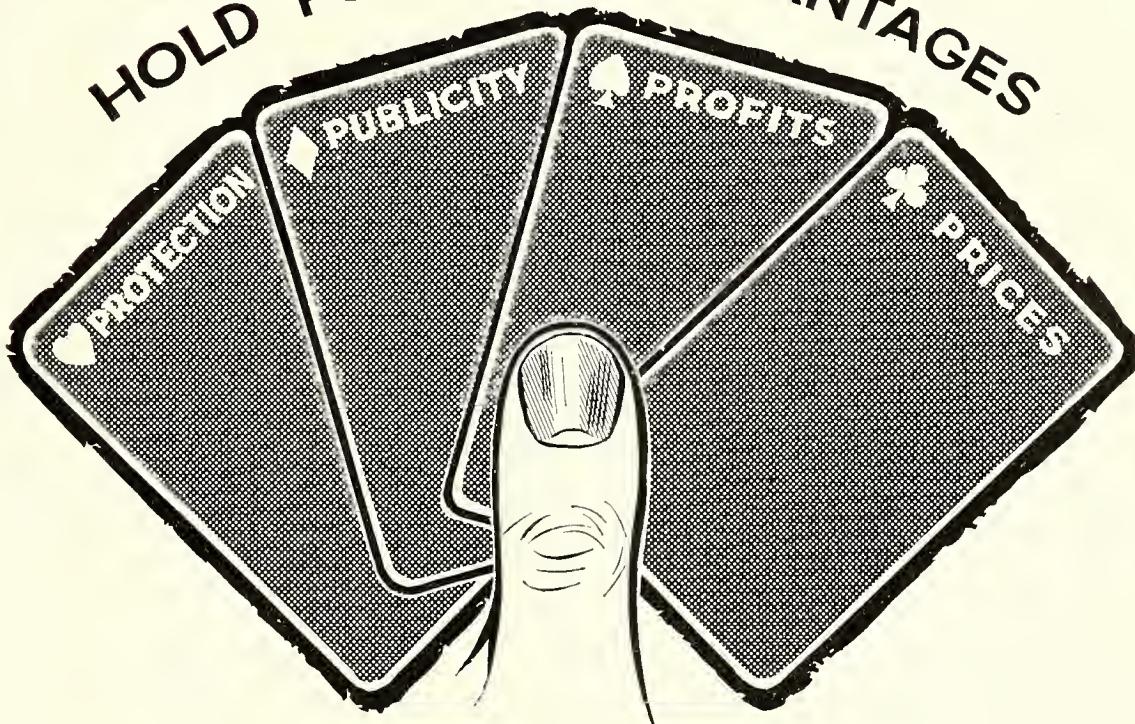
N. IRELAND:-	MAGHERALIN, LURGAN, CO. ARMAGH.
BIRMINGHAM:-	63/64, COLESHILL STREET, BIRMINGHAM, 4.
BRISTOL:-	129, NEWFOUNDLAND ROAD, BRISTOL, 2.
SCOTLAND:-	127/139, MERRYLEE ROAD, GLASGOW, S. 4.
LEEDS:-	COAL ROAD, SEACROFT, LEEDS, 14.

*All orders, accounts, enquiries, etc., to Head Office or Branches.*

*Perfection in Protection*

# Sylvia SANITARY TOWELS

HOLD FOUR ACE ADVANTAGES



**no wonder sales are soaring . . .  
. . . are you getting your share ?**

◆ PROTECTION High absorbency :  
Safe moistureproof backs : Sewn-on loops : Silky soft knitted covers :  
Full range of generous sizes.

◆ PUBLICITY National Advertising :  
Self-service Display Stands : Attractive pack : Showcards : Window Stickers.

◆ PROFITS Good profit rates :  
Generous bonus terms : Direct to retail only.

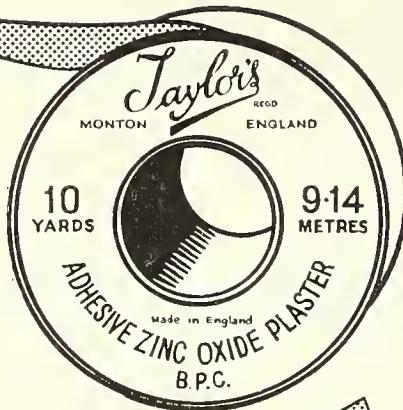
◆ PRICES Top quality towels at medium prices.

Size	Trade	Retail
0	20/-	2/2
1	21/6	2/4
2	23/3	2/9
3	31/3	3/5

GENERAL QUANTITY TERMS

SEND FOR A TRIAL ORDER AND GAIN  
REGULAR CUSTOMERS

**Cuxson, Gerrard & Co. Ltd.**  
Oldbury Birmingham



There's  
always  
a  
steady  
sale  
for

*Taylor's*  
REG. N° 501079

**ZINC OXIDE  
PLASTER**

EDWARD TAYLOR LTD  
MONTON, ECCLES, MANCHESTER

TF 228

**YOU'RE BOUND TO WIN  
WITH**  
**Linc-o-Lin**

BECAUSE THE ODDS ARE WITH  
YOU TO GAIN MANY NEW CUS-  
TOMERS AND POCKET HUGE  
WINNINGS—IF YOU CARRY THESE

EXCITING **Linc-o-Lin** PRODUCTS THAT LEAD THE FIELD.

NEW FOIL FOR SINGLE APPLICATION BEER SHAMPOO.  
Same high quality beer shampoo—same low price.



NEW LACQUER REMOVING  
SHAMPOO SACHETS. Takes  
care of a serious modern day  
hair problem. Packed in eye-  
catching display box of 6 dozen  
sachets, 25/- per box plus 25%  
P.T. (Suggested retail 7½d.)

NEW UNIVERSAL HAIR TREATMENT  
SINGLE APPLICATION SACHET,  
mounted on 'instructions for use' card.  
Solves practically any hair problem.  
Packed in attractive display box of 3 dozen  
sachets, 14/- plus 25% P.T. (Suggested  
retail 9d.)



PLACE THESE "FAVOURITES" ON YOUR SHELVES  
THEY'RE ALL WINNERS!



From your wholesaler, or write:  
**LINCOLN CHEMICALS LTD.**  
14a NEW BROADWAY, LONDON, W.5

**Stock up with . . .**



**SYNFOAM  
SUPER  
SPONGE**

HONEYCOMB . ALL PURPOSE  
FULLY SYNTHETIC

STANDARD SIZE Retail Price 2/10

LARGE SIZE Retail Price 3/9

GIANT SIZE Retail Price 6/0

USUAL DISCOUNTS

Each Sponge In a 3-coloured transparent sleeve. Each  
doz. in 4-coloured show carton. 12doz. in cardboard box.

Obtainable from YOUR USUAL WHOLESALER  
or contact :—

**FLETCHER & FARLOW LTD.**

Finsbury Court, Finsbury Pavement,  
London, E.C.2 . Tel : MONarch 6810

**"SYNFOAM SUPER"**  
**SELLS ON SIGHT!**

# Cut shop- fitting costs with



*Remploy*

Patent No. 641839



## SHELVING

KNOWN THROUGHOUT THE WORLD

### NO OUTSIDE LABOUR NEEDED TO ASSEMBLE

Fitting or refitting your shop with Remploy-Lundia prefabricated shelving saves you money. It needs no outside labour to assemble . . . it costs far less than custom-built installations . . . and it is remarkably adaptable.

Because of the comprehensive range of sizes, Remploy-Lundia Shelving can fit into any given wall space to *within 6 inches*. Each shelf is adjustable—can be moved up or down at intervals of  $\frac{1}{4}$  inch.

Any combination of widths can be joined together, and extension bays are easily added to existing Remploy-Lundia units.

Made from polished hardwood in natural finish, Remploy-Lundia Shelving is smart looking as well as practical. Remploy-Lundia can cost as little as 70/- per foot by 6ft. high.

**Fill in coupon today for full details of Remploy-Lundia Shelving**

TO : REMPLOY LIMITED, Remploy House, (Dept. C.D.13) 415 Edgware Road, N.W.2.

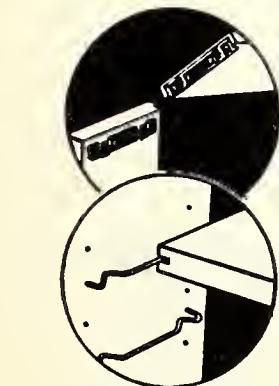
Please send me full details of Remploy-Lundia Shelving

Tel: GLA. 8020

NAME . . . . .

ADDRESS . . . . .

London Showroom : 22 Bruton St., W.1. Tel : MAYfair 4881/2



Easy to assemble Strong fully interlocking bars fit neatly into one another, securely holding top, bottom and centre shelf to uprights. Shelves simple to adjust. Special spring clips plug into uprights of Remploy-Lundia Shelves at  $\frac{1}{4}$  inch intervals. The shelves, grooved at both ends, slide along the clips, completely concealing them. Shelf grooves do not show from front view.



PRICE  
3 GNS

## AUTO A SLIDE VIEWER

*Supplies are now available from the Pullin Optical Company Limited or your usual wholesaler.*

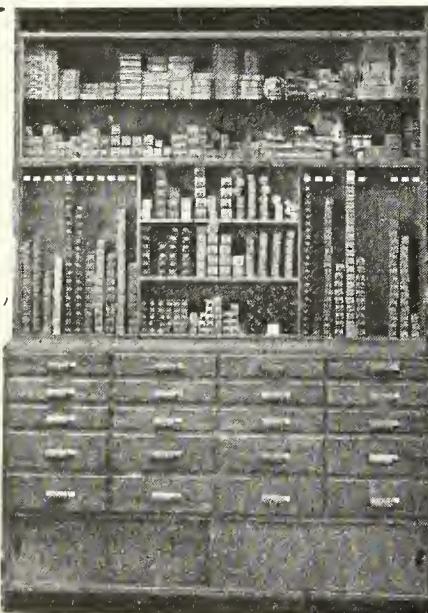
**The Pullin Optical Co. Ltd.**

Ellis House, Aintree Road, Perivale, Greenford, Middlesex

Buy direct from the manufacturers  
**NORLAND** INTERIOR DISPLAY UNITS

### THE "PH2" FILM UNIT

This attractive and useful fitting has a dispenser specifically designed for the quick and easy sale of films. The dispenser is divided at the back by glass partitions and as a film is removed so another drops into its place. A display section fitted above the dispenser unit is ideal for showing all forms of accessories, and has glass sliding doors and glass shelf. Below the film dispenser is a drawer and stock cupboard unit with flush sliding oak doors. The whole unit is French polished in light oak and has an angled cornice running the full length of the fitting in either an oak or ebony finish.



As illustrated 5' long x 7' high with 20 drawers. Ex-works £77

6' long x 7' high with 25 drawers. Ex-works £85

We welcome all your shopfitting enquiries  
★ Deferred payments can be arranged ★ Write for complete catalogue

**LIDDLE KEEN & CO., LTD.**  
NORLAND YARD, LONDON, W.11 Tel: PARK 9881/2



*Specialists  
in High-Class  
Label Reproduction*

*for Chemists*

**SUTTLEY & SILVERLOCK**

ANDOVER, HANTS  
TEL. 2234

Are you stocking  
THE BEST Auto  
Slide Viewer?

**BEST BECAUSE** it takes card, glass or plastic mounted slides OR a mixture of all three!

**BEST BECAUSE** loading is simpler than with any other viewer.

**BEST BECAUSE** only a finger-tip sliding action is needed to illuminate the screen and change the slide simultaneously.

**BEST BECAUSE** after viewing, the slides automatically return to the top of the pile.

**BEST BECAUSE** when the sequence is completed they are immediately ready for removal—or repetition.

**BEST BECAUSE** single slide showing is possible through a side aperture.

*Yes—the Auto A does cost that little bit more. But then you want to stock the best, don't you?*

*The*  
**CHEMIST AND DRUGGIST**  
 CLASSIFIED ADVERTISEMENTS

TELEPHONE CENTRAL 6565

Address Box Number Replies to: THE CHEMIST AND DRUGGIST, 28 ESSEX ST., STRAND, LONDON, W.C.2

**APPOINTMENTS** — 24/- per  $\frac{1}{2}$ " s.c. minimum and pro rata. **AGENTS** — **AUCTION SALES** — **BUSINESSES FOR SALE** and **WANTED** — **CLEARANCES** and **WANTS** — **CONTRACTS** — **MISCELLANEOUS** — **PATENTS** — **PARTNERSHIPS** — **PREMISES** — **PUBLIC and LEGAL NOTICES** — **SITUATIONS VACANT**. Run-on — 4/- per line (minimum 20/-). Semi-display — 24/- per  $\frac{1}{2}$ " s.c. minimum. Displayed with border rule, larger type faces and blocks — 60/- per s.c.i minimum. Reduced rates for one-third, one-half and full pages on application. **SITUATIONS WANTED** — 6/- per 18 words minimum, then 4d. per word. Use of Box No. — 2/-. Advertisements received by 4 p.m. **Tuesday** published same week.

**PREMISES**

**SHOPS TO LET.** Millfield Farm Estate, Leicester, with s.c. maisonette and garage. Two units remain in new parade of 10 shops serving large estate and surrounding district. Traders represented include butcher, greengrocer, hardware, hairdresser, Co-operative, etc. Rent from £580 per annum exclusive. Apply: Jones, Lang, Wootton & Sons, 58 St. James's Street, S.W.1. HYDe Park 6040, or H. & F. Tarrant & Sons, 16 Market Street, Leicester. C 8096

**APPOINTMENTS****CENTRAL GROUP HOSPITAL MANAGEMENT COMMITTEE**

**Locum Pharmacist**  
in charge at Mildmay Mission Hospital for holiday relief duty: 17th to 29th June, 1963. Salary £23 2s. per week. Apply to Chief Pharmacist, Bethnal Green Hospital, Cambridge Heath Road, London, E.2. C 633

**CROYDON GENERAL HOSPITAL (200 beds)**

**Dispensing Assistant**  
for duties in busy, modern, Hospital Pharmacy. Apothecaries' Hall Certificate or previous dispensing experience necessary. Salary either on scale £230—£580 p.a. or £340—£660 p.a. according to qualifications, plus appropriate London Weighting allowance. Interested applicants wishing to see over Pharmacy, are requested to contact Chief Pharmacist direct (C.R.O. 7755). Application Form obtainable from Group Secretary, General Hospital, London Road, Croydon, Surrey. C 8087

**CENTRAL GROUP HOSPITAL MANAGEMENT COMMITTEE**

**Locum Pharmacist**  
for holiday relief duty in the hospitals of the Group, 13th May to 28th Sept., inclusive. Salary 19 gns. p.w. Apply to Chief Pharmacist, Bethnal Green Hospital, Cambridge Heath Road, London, E.2. C 634

**HAMMERSMITH HOSPITAL, AND POST-GRADUATE MEDICAL SCHOOL, DU CANE ROAD, LONDON, W.12**

**Pharmacist**  
required at above General Post-graduate Teaching Hospital (Category V). Post offers varied work and excellent experience. Pleasant working conditions. Previous experience not essential. Whitley salary scale £725—£970 per annum plus London Allowance. Commencing salary within this scale according to experience. Applications stating age, qualifications and experience and naming two referees to Chief Pharmacist by April 6, 1963. C 8112

**OPPORTUNITIES FOR CHEMISTS**

last remaining shops in new parades

**SHOPS TO LET**

With residential upper parts in new parades of multiple traders providing sole shopping facilities for vast new housing estates at:

**WATERLOOVILLE (Nr. Portsmouth)****CROWTHORNE (Nr. Bracknell, Berks.)****WATFORD, Herts (St. Albans Road)****NO DUPLICATION OF TRADES***21 year leases at low rents***NO PREMIUM****REASONABLE RENT FREE PERIOD ALLOWED***Sole Agents***NORMAN HIRSHFIELD & PARTNERS**

85, George Street, London, W.1.

WELbeck 9145 (6 lines)

C 5135

**FINCHLEY MEMORIAL HOSPITAL, GRANVILLE ROAD, LONDON, N.12****Senior Pharmacist**

required. Whitley Council scale with London Weighting. Applications to Chief Pharmacist, Barnet General Hospital, Wellhouse Lane, Barnet, Herts, with names of two referees. C 8119

**GROVE PARK HOSPITAL, LEE, S.E.12****Chief Pharmacist**

Category II, £940 to £1,260 plus London Weighting allowance. Applications naming two referees to Group Secretary, Lewisham Hospital, High Street, S.E.13. C 632

**MEDWAY AND GRAVESEND HOSPITAL MANAGEMENT COMMITTEE, ST. BARTHOLOMEW'S HOSPITAL, ROCHESTER, KENT****Dispensing Assistant**

required at the above busy general hospital. Salary according to age and experience on scale rising to £580. Possession of the Certificate of the Society of Apothecaries or an equivalent qualification would be an advantage, an additional allowance of £50 per annum is payable for this Certificate. Please apply to the Hospital Secretary, giving details of age, qualifications, experience and names of two referees. C 8111

**ST. ANDREW'S HOSPITAL, DEVONS ROAD, BOW, E.3****Senior Pharmacist or Pharmacist**

required. Whitley Council salary and conditions. Application forms obtainable from the Group Secretary, Bow Group, H.M.C., St. Clement's Hospital, Bow Road, E.3. C 8115

**SHOTLEY BRIDGE GENERAL HOSPITAL, CONSETT, Co. DURHAM****Pharmacist**

Applications are invited from Registered Pharmacists for the above appointment vacant early June. This is an acute hospital of 529 beds and will be the site of a new district general hospital of 900 beds on which work has already commenced. Modern Department equipped with facilities for manufacturing and sterile work. Salary £725 per annum, rising by annual increments to £970 per annum. Residential accommodation is available for female applicants.

Applications, giving details of age, education and experience and naming two referees to Hospital Secretary. C 8102

**ST. CLEMENT'S HOSPITAL, BOW ROAD, LONDON, E.3****Pharmacist**

in sole charge required, part-time (24 hrs. p.w.) for this 117 bedded psychiatric hospital with out-patient department and Day Hospital. Application forms obtainable from the Group Secretary, Bow Group H.M.C., St. Clement's Hospital, Bow Road, E.3. C 8116

## Appointments—Continued

THE FOUNTAIN &  
CARSHALTON GROUP  
HOSPITAL MANAGEMENT  
COMMITTEE

## Dispensing Assistant

required at Queen Mary's Hospital for Children, Carshalton, Surrey. Salary scale £440—£580 at age 22 and over, otherwise according to age. Certificate of the Society of Apothecaries desirable for which a qualification allowance of £50 will be paid. London Weighting in addition. Telephone enquiries to Chief Pharmacist, Mrs. McDonald (Wainwright 6635, Ext. 11) Applications, with names of two referees, to Group Secretary, as soon as possible.

C 8082

THE LONDON HOSPITAL,  
WHITECHAPEL, E.1

## Dispensing Assistant

required at the above hospital. Write to House Governor.

C 8117

THREE COUNTIES HOSPITAL,  
ARLESEY, BEDFORDSHIRE

## Dispensing Assistant

Applications are invited for Dispensing Assistant. Salary and conditions as Whitley Council scale, £425 at age 22 or over, rising to £575 per annum. Accommodation available for single man or woman applicant. Applications, stating age and experience, together with the names and addresses of two referees should be sent to The Medical Superintendent.

C 576

THE LONDON HOSPITAL,  
WHITECHAPEL, E.1

## Locum Pharmacist

required immediately for several weeks. Salary £19 19s. per week. Applications to House Governor.

C 8118

WEST CUMBERLAND  
HOSPITAL  
MANAGEMENT COMMITTEE

## Deputy Chief Pharmacist

required for Group Pharmacy at present at Whitehaven Hospital but shortly to be transferred to the new West Cumberland Hospital. Special responsibility for the aseptic preparation areas. Salary scale £855 x £35 (2)—£925 x £40 (6)—£1,165 per annum. Whitley Council conditions of service. Residential accommodation might be available. Applications, with full particulars and names of two referees, to the Group Secretary at the West Cumberland Hospital, Hensingham, Whitehaven, Cumberland.

C 8100

## SITUATIONS VACANT

## RETAIL (HOME)

**BANSTEAD, SURREY.** Experienced dispensing assistant required. Knowledge of photographics and cosmetics (most agencies) an advantage. Modern pharmacy now being extended. Staff of six. Holiday arrangements honoured. Apply with full particulars to R. R. Skidmore (Chemists), Ltd., Burgh Heath 720 (evenings or Sunday Burgh Heath 2024). C 5140

**COVENTRY.** Pharmacist required to manage old-established business. No rota duties or clerical work. Salary plus 25 per cent. net profit. Three weeks' holiday. Box C 5127.

**DARTMOUTH.** Manager required in this pleasant Devon town. Good-class business. Saturday early closing. Little dispensing. Apply, stating experience and wages required, to: The Pharmacy Manager, P.C.S. Pharmacy Office, Vauxhall Street, Plymouth. C 5137

## APPOINTMENTS OVERSEAS

## INVERCARGILL

NEW ZEALAND  
SOUTHLAND HOSPITAL BOARD

APPLICATIONS are invited from pharmacists for a position in the Board's base hospital at Kew, Invercargill.

Salary and conditions of appointment are in accordance with the New Zealand Hospital Boards' Pharmacists Award and a salary would be determined within the scale of £870/915/950/995 p.a. These rates are all subject to a 2½% weighting by reason of General Wage Order at present in force.

Successful applicants entering a bond guaranteeing two years service would qualify for assistance with payment of passage, also baggage allowances from United Kingdom to New Zealand in respect of himself and family.

*Further information may be obtained from*

THE CHIEF PHARMACIST  
SOUTHLAND HOSPITAL  
KEW, INVERCARGILL  
NEW ZEALAND

C 8083

## SITUATIONS VACANT WHOLESALE

Opportunity for  
YOUNG PHARMACIST

An opportunity is being created for a young Pharmacist, with retail or wholesale experience, to work as

## Assistant to the Sales Director

of a company which has recently joined the Horlicks Group. This company, Gale, Baiss and Co., Ltd., is engaged in supplying pharmaceuticals, standard drugs and galenicals to home and overseas markets. The premises are in a newly equipped wing of the parent company's factory at Slough.

The successful candidate's work will include some technical and sales correspondence, preparation of tenders, and purchasing of bulk supplies of drugs. Some experience in the sales or purchasing office of a pharmaceutical manufacturer would be an advantage.

This will be a progressive post for the right man. The starting salary will be subject to discussion. The company has a good Pension Scheme.

*Please write in confidence, enclosing a recent photograph, which will be returned, to the:*

PHARMACEUTICAL DIVISION MANAGER  
HORLICKS LIMITED, SLOUGH, BUCKS.

C 5131

**Situations Vacant—Continued**

**JOHN KELSEY CHEMISTS LTD.** Immediate appointments, Purley and Cambridge, for pharmacists/branch managers. Good salaries. Pensionable. Progressive expanding company. Vacancies shortly, Oxford, Corby, Newport (Mon.), Houghton Regis, Redditch, New premises. Most with maisonette. Director Superintendent, 21 Lime Street, E.C.3. C 5124

**PHARMACIST REQUIRED** for high-class pharmacy. Apply: The Manager, Cooper, Son & Co., Ltd., 120 Gloucester Road, S.W.7. Phone: FRO 2824. C 5138

**PHARMACIST ASSISTANT** required soon. Dispensing business. Duties mostly in dispensary. Adequate staff and excellent opportunities for keen Pharmacist. Superrannuation scheme available for permanency. Apply Hamptons, 47 Northgate Street, Gloucester, C 5141

**WHOLESALE**

**JOHN BELL, HILLS & LUCAS, LTD.**, require representative for West London and parts of Middlesex. Remuneration by salary, commission and expenses. Car provided. Pension scheme. Applicants should reside in area. Write: Managing Director, Oxford Works, Worsley Bridge Road, S.E.26. C 8114

**EXPERIENCED REPRESENTATIVE  
REQUIRED**

To call on Chemists only in the counties of Glamorganshire, Monmouthshire and Gloucestershire. In addition to a wide range of drugs and pharmaceuticals, the company's products include Wright's Coal Tar Soap/Shampoo and a number of other nationally advertised proprietaries. Applicants should already be calling on Chemists in the area and be based on or near Cardiff. Preference will be given to candidates in the 25/35 age group. A Staff Contributory Superannuation Scheme is in operation. The company provides a car and usual expenses, together with a basic salary, plus commission. All replies will be acknowledged and treated in confidence. Write, giving fullest details of career to date, to Sales Manager, Wright Layman & Umney Limited, 42/50 Southwark Street, London, S.E.1. C 8120

**EXPERIENCED REPRESENTATIVE**

required by long established firm of wholesale manufacturing chemists to cover their North and West London territory. Progressive position for right man, guaranteed salary, five-day week, pension scheme, car provided. Apply Box C 628.

**MIDLAND SALES REPRESENTATIVE.** We are looking for a very ambitious and successful salesman to sell a well-known range of toilet brush merchandise in the Midland area. Applicants should be well connected with chemist, sundry and fancy goods wholesalers. Box C 5132.

**TABLET COATER** required by London pharmaceutical manufacturers. Salary not less than £800. 5-day week. Please apply to Box C 8104.

**TABLET MAKER AND COATER** required by London pharmaceutical manufacturers. Salary not less than £1,000 p.a. 5-day week. Please apply to Box C 8103.

**SITUATIONS VACANT WHOLESALE****BUILDERS REQUIRED**

A progressive Swiss company is establishing a subsidiary in Britain. To ensure the proper building of its business, in not only the ethical field but also in popular selling, it is looking for better-than-average representatives, who can really help in the building and at the same time be the architects of progressively rewarding personal careers.

First recruitment of staff will be for the London area and we need men, covering North, East, West and South London territories, who can produce real evidence of successful medical detailing and of established relationship with hospitals and trade.

Salaries will be interesting: the company will provide car, expenses, and operate a sound pensions fund.

**IF YOU ARE UNDER 40, CAN REALLY BUILD BUSINESS, AND CAN, IN YOUR APPLICATION, SETTING OUT FULL DETAILS OF CAREER TO DATE AND GIVING NAMES OF REFEREES, CONVINCE US YOU ARE THE MAN WE NEED, WRITE, IN CONFIDENCE, TO "ZYMA," AT 76 COMPTONS LANE, HORSHAM, SUSSEX.**

C 5139

**OVERSEAS****Exceptional Opportunity****Occurs in Kenya**

An old established firm of Manufacturing and Wholesale Chemists require the services of an energetic fully trained Pharmacist, to act as second in command to the Managing Director. Able to control staff, supervise the manufacture of drugs and packaging, and develop the distribution of ethicals along modern European lines. Intensive training for 3 months will be given in England prior to departure. Must have previous wholesale experience.

Salary £2000, plus commission, plus house and car allowance, with paid home leave.

Interviews can be arranged in London or Provinces.

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